





610.5

946  
36



Library  
of the  
Academy of Medicine,  
Toronto.

8482

Presented by

John Ferguson Esq. M.D.  
1917









THE

GLASGOW MEDICAL JOURNAL







THE  
GLASGOW MEDICAL JOURNAL

EDITED BY

G. H. EDINGTON AND W. R. JACK

WITH THE ASSISTANCE OF

R. F. YOUNG (SUB-EDITOR OF "ABSTRACTS")

A. J. BALLANTYNE

J. BROWNLEE

R. M. BUCHANAN

E. P. CATHCART

F. J. CHARTERIS

L. FINDLAY

A. A. GRAY

R. MUIR

E. H. L. OLIPHANT

J. R. RIDDELL

FOR THE

Glasgow and West of Scotland Medical Association

---

JULY TO DECEMBER, 1916

---

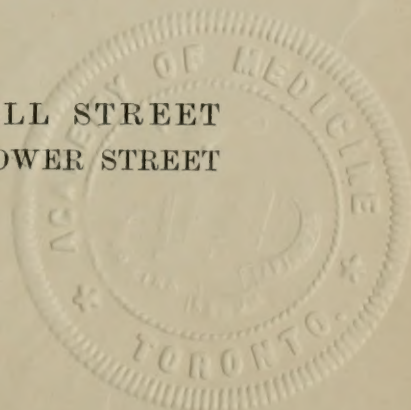
VOL. LXXXVI

GLASGOW:

ALEX. MACDOUGALL, 70 MITCHELL STREET

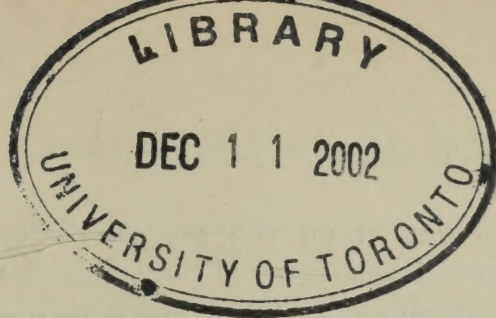
LONDON: H. K. LEWIS & CO. LTD., 136 GOWER STREET

1916









THE  
GLASGOW MEDICAL JOURNAL.

---

No. I. JULY, 1916.

---

ORIGINAL ARTICLES.

---

SOME VARIETIES OF CONGENITAL HEART DISEASE  
—PATENT FORAMEN OVALE—PATENT INTER-  
VENTRICULAR SEPTUM—PULMONIC STENOSIS—  
PATENT DUCTUS ARTERIOSUS.

By LEONARD FINDLAY, M.D.,

Visiting Physician, Royal Hospital for Sick Children, Glasgow ;

AND

W. BLAIR M. MARTIN, M.D.,

Lecturer in Bacteriology, Glasgow University, and Pathologist, Royal Hospital  
for Sick Children, Glasgow.

*(From the Royal Hospital for Sick Children, Glasgow.)*

MUCH has been written not only regarding the diagnosis of some congenital cardiac anomaly as being the cause of morbus ceruleus or some other morbid phenomena, but also regarding the special diagnostic features in any particular lesion, yet a comparatively small experience is sufficient to convince one of the inutility of the usually accepted canons in arriving at a correct diagnosis in any individual case. In congenital heart disease physical signs and symptoms are notoriously misleading, and not infrequently a cardiac defect unsuspected during life is disclosed at autopsy, or the true nature of a suspected lesion



may only be revealed on the *post-mortem* table. A partial explanation for this difficulty is the complex nature of the malformation usually present. The signs and symptoms, too, are not always commensurate with the severity of the defect; one case may be accompanied by severe cyanosis and prominent signs, whereas another and more marked example of the same pathological type may be unaccompanied by either.

The following series of cases is of interest as further emphasising the difficulty of diagnosis; as demonstrating how a slight cardiac anomaly, usually latent, may become manifest through the intervention of a pulmonary complication; and, finally, as substantiating the idea that congenital syphilis may play a part in the etiology of cardiac malformations.

CASE I.—*Patent foramen ovale.*

I. B., female, æt. 6 weeks. Both parents are alive and well. There have been eight pregnancies, of which one terminated with a still-birth, but the other children are all quite healthy.

The child was premature (seven months), was born with difficulty, and did not breathe for fully an hour in spite of continued artificial respiration. She never took the breast and was unable to suck, and, in consequence, was fed with a spoon. Nevertheless, the child seemed to do fairly well, until at the age of 4 weeks she commenced to take fits characterised by rigidity of the limbs, cyanosis, and stoppage of the breathing. At times it looked as if the child were dead, when with a gasp the breathing would be resumed, and the seizure would pass off. These attacks occurred with great frequency, and as time progressed became both more frequent and more severe.

On admission it was noted that the child was small—weight, 6 lb. 13 oz.—but fairly well nourished, and extremely cyanosed, the whole body being of a plum colour. She was the subject of many deformities—the nose was unduly prominent, the ears small and poorly formed, the eyes diminutive and deeply set in the orbital cavities, and the seat of a double cataract with coloboma on the left side. On the left hand there was situated a spurious supernumerary digit, and, in addition to an umbilical hernia, a small abdominal hernia was to be seen in the middle line midway between the umbilicus and the xiphisternum.

The pulse was small and irregular, and could not be counted. There was no enlargement of the cardiac dulness, but all over the precordium a loud V.S. murmur was audible, having its seat of maximum intensity at the base. With the exception of some wheezing râles nothing abnormal was detected in the lungs. The temperature was normal.

The child continued in much the same state for the few days of residence in hospital. Occasionally she took the fits described above, and during one of these died.

*Summary of lesions found post-mortem.*—Hypoplasia of eyes with corneal opacity, coloboma, and congenital cataract—Ventral herniæ—Fœtal lobulation of spleen and kidneys—Patent foramen ovale—Catarrhal bronchitis with early pneumococcic broncho-pneumonia, much collapse of lung, and slight compensatory emphysema—Venous congestion of organs.

*Details of post-mortem examination.*—The body measures  $19\frac{1}{2}$  inches from vertex to sole, weighs 6 lb. 13 oz., and is well supplied with adipose tissue.

The head appears small in contrast to the face; cranial circumference 13 inches, sagittal diameter 4 inches, transverse 3 inches, height from vertex to sella turcica 3 inches. The fontanelles are of normal size. The eyelid clefts are narrow, and the orbital contents sunken. The eyeballs are 0·4 inch in diameter. There are congenital cataracts in both, a coloboma iridis of the left, and a corneal opacity in the right eye. The nose shows a prominent bridge, and the lips and palate are normal. The right external ear is more fully expanded than the left. The umbilicus is normal, but between it and the sternum, a distance of  $3\frac{1}{2}$  inches, are two thinnings of the abdominal wall permitting slight mesial hernial protrusions. The larger, which is just above the umbilical ring, measures 1 inch in the long axis of the body; the other, which is much smaller, is midway to the costal arch. The vulva is normal. On the left little finger, attached to the tip of the proximal phalanx by skin only, is a polypoid protuberance showing a terminal dimple but no nail. Superficially it has the appearance of a supernumerary digit.

The thymus is well developed.

The pericardium is normal.



The heart weighs  $\frac{3}{4}$  oz., and is of normal shape. The semi-lunar valves are competent. Aortic orifice measures 0·3 inch, mitral 0·4 inch, pulmonic 0·35 inch, and tricuspid 0·5 inch. The foramen ovale, which is normally valved, admits cone to the diameter of 0·2 inch. The septum ventriculi is complete, the pars membranacea showing as a dimple in left ventricle. Length of left ventricle is  $1\frac{1}{8}$  inch, and maximum thickness of wall is  $\frac{3}{16}$  inch. The cardiac muscle is apparently healthy. The ductus arteriosus is obliterated.

The pleural sacs are normal.

The right lung weighs 1 oz. The middle lobe is ill-defined. Save for the tip of the upper lobe anteriorly, the lung appears imperfectly expanded, and there are numerous firm livid areas throughout, which, on section, are comparatively airless. The left lung also weighs 1 oz. It is free from these livid areas, but the subpleural capillaries are injected, especially posteriorly, and the lung, though it floats in water, does not appear to be well expanded. Muco-pus, rich in chained pneumococci, is present in the whole bronchial tree. The bronchial glands were not notably altered. A portion of the right upper lobe was preserved for microscopical examination. It shows irregular catarrhal broncho-pneumonic consolidation, with a considerable amount of collapse and some intervening emphysema. In no part is the foetal atelectatic alveolar condition preserved. The intra-alveolar exudation varies in amount and in degree in different areas, but is nowhere fibrinous. Many of the bronchioles show longitudinal infolding of their walls and contain plugs of desquamated epithelium, but there is, on the whole, little polymorph infiltration of the bronchioles. In Gram-stained sections, however, pneumococci are very numerous in the bronchiole plugs, and they are found in smaller numbers in certain of the consolidated alveoli.

The diaphragm is complete, and the abdominal viscera are normally situated.

Stomach and intestines show no gross abnormality.

Liver weighs  $4\frac{1}{2}$  oz., shows cloudy swelling and venous congestion.

Spleen weighs  $\frac{1}{2}$  oz., measures  $2\frac{3}{4}$  inches by  $1\frac{1}{8}$  inch, shows marked foetal lobulation and venous congestion.

Kidneys weigh 1 oz. each, foetal lobulation persists, the

pyramids are streaked with uratic deposits, and the organs are venously congested.

The suprarenals, bladder, and genitals are normal.

The cerebral sinuses are free of clot, the membranes and cerebrum are a little congested, otherwise there is nothing to record in the brain.

In what way can the extreme degree of cyanosis and the loud V.S. murmur present in this case be explained? Undoubtedly there was a condition of pulmonary collapse and broncho-pneumonia, either of which may be accompanied by cyanosis, but never in our experience to the extreme degree shown here. As mentioned in the case history, the colour of the skin was of a deep plum-purple hue warranting as much as any case ever did the designation "*morbus ceruleus*" or "*maladie bleue*."

Although it is with difficulty that one can imagine a V.S. murmur being due to a communication between the auricles, and one would rather, *à priori*, have expected a murmur with an A.S. or V.D. rhythm, such has undoubtedly been described. The majority of authors of text-books speak of the signs and symptoms of patency of the foramen ovale in very general terms, stating that the condition is usually unaccompanied by either signs or symptoms, but that it may be associated with not only severe cyanosis but also loud murmurs, A.S., V.S., or V.D. in rhythm.

A notable dissentient from the above is Potain.<sup>1</sup> He says "it," *i.e.*, patent foramen ovale, "seems incapable of determining a bruit. For when this lesion is isolated it is not accompanied by any abnormal bruit, and I do not know of a single observation where the murmur attributed to it could not receive a better interpretation. The volume of the stream of blood at this point is too small, and the force of projection too slight." A careful survey of Potain's paper reveals nothing but this expression of opinion, and no evidence of arguments for or against such a view.

In this discussion we, of course, only refer to a patency of the foramen with perfect valving, and not to gross defects of the interauricular septum admitting of free admixture of venous and arterial bloods, and the possibility of cyanosis,



although the same caveat regarding the rhythm of any murmur so produced still holds.

Patency of the foramen ovale is, of course, a normal condition at birth. It is usually supposed to close by the end of the first week, but according to many authorities closure of the orifice may be delayed considerably without there being during life any suspicion of the fact. Bizot has found the foramen patent without any morbid phenomena eleven times in 34 subjects from 1 to 15 years, eighteen times in 50 subjects from 15 to 39 years, and fourteen times in 63 subjects from 40 to 89 years. Abbot<sup>2</sup> quotes similar findings by Zahn and Adami. Bard and Curtillet,<sup>3</sup> who quote Bizot's statistics, state that they have only rarely in their *post-mortem* examinations found the foramen patent, and express the opinion that his experience must be exceptional, an opinion with which we are inclined to agree. From our observations it is rare to find a patency of any degree after a month, and in the great majority of these the orifice is minute, and can best be described as tunnelled owing to the overlapping of the valve.

There is no doubt, however, that a certain degree of patency of the foramen may persist for many years without the super-vention of symptoms, a not unlikely event so long as the pressure on the left side of the heart continues, as normally, higher than that on the right side, since with the valve well developed there cannot be under these conditions any mingling of the auricular bloods. But when the pressure in the right heart rises above that in the left as a result of obstruction to the pulmonary circulation, entailed by diminution in the calibre of the pulmonary artery itself as in congenital stenosis, or of the capillaries in the lung consequent on collapse or broncho-pneumonia, the increase of pressure will tend to open the functionally closed foramen and permit of a mingling of the venous and arterial bloods. As a matter of fact, patency of the foramen is a constant accompaniment of congenital pulmonic stenosis and of pulmonary atelectasis. It is certain that the severe cyanosis in this latter condition is in part accounted for by the loss of function of the valve. It is interesting to remind the reader in this connection that the symptomatology of pulmonary atelectasis and congenital heart disease is identical, which is not remarkable in view of our case and those to be recorded

below. It is also generally held that patency of the foramen is an adverse circumstance in any respiratory condition.

That this congenital defect of the heart may, nevertheless, be associated with severe cyanosis and physical signs is shown by definite clinical histories. It is a curious fact, however, that the only definite records of cases that we have been able to find date from the sixties and seventies of last century. A careful search of recent literature has failed to reveal a single instance of signs and symptoms of congenital heart disease during infancy with patency of the foramen ovale as the only *post-mortem* finding.

Foster<sup>4</sup> well recorded in 1863 a very interesting case of patency of the foramen ovale with a V.S. murmur and cyanosis, diagnosed as such during life and confirmed by *post-mortem* examination. The child, a female, and 2 years of age when it came under observation, was of a deep purple colour, subject to coldness of the extremities and mentally backward. The pulse numbered 110 per minute, and was small and weak; there was no enlargement of the heart, but on auscultating "a faint murmur was heard with the latter part of the first sound, on a level with the lower edge of the third rib at its junction with the sternum. This murmur varied in intensity, and occasionally gave rather the idea of a muffling of the first sound. It did not extend upwards, and was not to be heard at the apex." At the *post-mortem* examination some congestion of the bronchi and lungs was detected, the pericardium contained  $1\frac{1}{2}$  oz. of serum, the heart was normal in size and appearance, except for slight thickening of the wall of the right auricle, and a patent foramen ovale allowing the passage of a goose-quill. The valve was attached above and below in the left auricle, but deficient in front, "leaving an opening of the size mentioned when the septum of the auricles was in its normal position." No other abnormality was detected.

In the discussion of the physical signs warranting the diagnosis the author lays stress on the character of the murmur being more a muffling of the first sound, on its localisation at the base and not being conducted into the vessels of the neck, on the fact that in intensity it was proportionate to the degree of the cyanosis, and on the condition being worse on the advent of any respiratory trouble. To account for



the systolic rhythm of the murmur he apparently assumes that the greatest difference between the pressures in the two auricles occurs "during diastole of the auricles, and therefore synchronously with the systole of the ventricles."

Interesting features in the clinical history of the case are the facts that the parents were cousins, that five of the seven children had been subjects of morbus ceruleus, and that during the pregnancies of the cyanotic children the mother had suffered much from palpitation. There was no evidence of syphilis in the parents or any of the children observed.

Mackey<sup>5</sup> in 1871 recorded the case of a female child of five months who came under observation suffering from a cough, and presenting a dusky colour of the skin which had been present from birth. The child was subject to convulsions, and during one of these death resulted. Auscultation of the heart revealed a "murmur with the first sound." At the autopsy the lungs were found in part collapsed; the heart enlarged, with dilatation and hypertrophy of the right ventricle, and a patent foramen ovale admitting a goose-quill; the valve was well developed; no other abnormality was detected.

Sansom<sup>6</sup> in 1875 reported the case of a male child, 8 months old, suffering from a cough and dyspnoea, and with a deep dusky-blue colour of the skin and a purple hue of the mucous membranes. The child was stated to be blue from birth. All over the precordium a "loud first sound bruit" was heard, with accentuation of the second sound. The child died in a convulsion. *Post-mortem* the heart was found to be small, with a patent foramen ovale. No other lesion. In the discussion of the case, Sansom considered the opening between the auricles too small for the admixture of arterial and venous blood, but he gives no other explanation for the cyanosis.

Closely related to the above discussion, and more especially with reference to the pathogenesis of the cyanosis in our case, is the condition of "cyanose tardive" to which Bard and Curtillet<sup>3</sup> have given prominence, but which had been previously described by other French observers, *e.g.*, Hardy.<sup>7</sup>

M. Hardy in 1875 described the case of a young man of 17 years who was under-developed and had always been subject to severe diarrhoea, in consequence of which there was much emaciation. During the last three or four years cyanosis had

appeared and had gradually increased in severity, but physical examination of the heart gave no help towards the explanation of the cyanosis. At the autopsy the heart was found much atrophied, with a patency of the foramen ovale sufficient to allow a pencil to pass. The author concluded that, as a result of the prolonged diarrhœa, the tone of the cardiac muscle was lost and, the orifice stretching, the valve was no longer able to close the opening completely.

Bard and Curtillet's case was that of a man who had enjoyed perfect health until the age of 42. From then on he had been subject to frequent and severe colds, and it was for one of these that he came under observation. On admission to hospital he was found to be suffering from chronic broncho-pneumonia, with an extreme degree of cyanosis. The apex beat was situated in the sixth space slightly outside the nipple line, but the cardiac sounds were devoid of murmur. At the *post-mortem* examination both lungs were found to be the seat of broncho-pneumonia, the auricles were dilated as also the tricuspid orifice, and the foramen ovale patent, admitting the end of a pen. The authors conclude that the cyanosis was due to mixing of the arterial and venous streams through the patent foramen ovale brought about by the increased pressure in the right auricle consequent on the pulmonary congestion.

More recently Tron<sup>8</sup> records an instance of "cyanose tardive" in which a correct diagnosis had been made during life. The patient was a man of 49 years who until his last few years had always enjoyed good health. For some years, however, he had suffered from periodic attacks of bronchitis with slight dyspnœa and an extreme degree of cyanosis, which was always relieved by venesection. He was admitted to hospital with a return of these symptoms and evidence of chronic parenchymatous nephritis. In view of the extreme degree of cyanosis a diagnosis of patent foramen ovale had been made, and at the *post-mortem* examination this suspicion was confirmed. The opening, which was well valved and could only allow of the passage of blood from right to left, had a diameter of 4 mm.

From a survey of these clinical histories with *post-mortem* findings, and from the fact that patency of the foramen ovale is occasionally an accidental finding at autopsy in cases unaccompanied by either murmur or cyanosis, it would appear



that *patency of the foramen ovale*, per se, is unable to produce cyanosis. The striking feature in all the cases, alike in the congenital and late examples, is the presence of some complication leading to a functional incompetence of the valve. In all the congenital cases the exciting factor was pulmonary mischief. True, in Sansom's case there is no mention made of the state of the lungs *post-mortem*, but, as the child suffered from a frequent cough, it is most probable that here also there was some pulmonary embarrassment.

Also, in the quoted examples of "*cyanose tardive*," some respiratory disease was the usual exciting factor. In Hardy's case, however, atony of the myocardium consequent on malnutrition caused, through stretching of the orifice, a patency of the foramen to become a patency of the interauricular septum.

One striking difference between the congenital and the late cases is the invariable presence of a murmur in the former and its absence in the latter. For the presence of the murmur we can offer no other explanation than the patency of the foramen ovale, in spite of the dictum of Potain.

#### CASE II.—*Patent interventricular septum.*

L. W., female, æt. 3 months, came under observation for breathlessness and blueness of the extremities which had been present from birth.

Mother is alive and well; the father suffers from spinal caries. Patient was illegitimate, and the mother's only child. The labour was normal, and the child was fed at the breast for six weeks, thereafter on half milk and water and Nestlé's milk at irregular intervals. From birth she had suffered from breathlessness, a frequent short cough, and coldness of the hands and feet, which were always blue in colour. There had been no increase in weight since birth, but there had been no gastro-intestinal disturbance.

On admission it was noted that the child was small—weight, 8 lb. 1 oz.—with pale lividity of the face and stridulous breathing. Nothing abnormal was detected on physical examination of the lungs, but all over the precordium a loud V.S. murmur was audible.

Next day there was not the slightest trace of lividity, pallor

being the striking feature. Over the abdomen and back a fairly extensive septic eruption was observed. There was a frequent cough, but nothing abnormal was detected on physical examination of the lungs.

The pulse numbered 140 to 150 per minute. The cardiac dulness was increased slightly to the left, and at the apical region the first sound was distinctly rough, but unaccompanied by any definite murmur. The second sound at both pulmonic and aortic areas was normal.

Ten days after admission, and one day before death, the following note was made:—"Child has steadily improved from day of admission, having increased in weight by 11 oz. The septic rash has in great part disappeared, and on several occasions examination of the heart has been carried out without anything abnormal being detected. The cough has been troublesome, but relief has been obtained with the administration of pulv. ipecac. co. and amm. chlor. Suddenly yesterday afternoon breathing became difficult, the child was cyanosed at the lips and finger-tips, and the temperature, which previously had been normal, rose to 106° F. Examination of the chest revealed impairment of the percussion note in the left axilla, with some moist râles and tubular R.M."

Later in the day the child rallied, and the temperature fell to 102° F., but early next morning the child took another similar attack and died.

*Summary of lesions found post-mortem.*—Defect of inter-ventricular septum at pars membranacea, with normal great arterial trunks, closed foramen ovale, and obliterated ductus arteriosus—Partial collapse of lungs, with terminal very early streptococcal broncho-pneumonia.

*Details of post-mortem examination.*—The body measures 22 inches, weighs 8 lb. 12 oz., and is normally developed. The skin shows evidences of a fading punctiform dermatitis of wide distribution.

The thymus is of average size.

The pericardium is normal.

The heart is of normal shape, the apex being formed by the left ventricle, which is distinctly larger than the right, and the aorta and pulmonary artery arise normally at the base.



The ductus arteriosus is impervious; the foramen ovale is completely closed; the orifices are normally valved, their dimensions being—aortic 0·35 inch, mitral 0·5 inch, pulmonary 0·4 inch, and tricuspid 0·55 inch in diameter; but the interventricular septum is incomplete at the pars membranacea site, leaving an aperture 0·2 inch in diameter. The condition here is apparently due to a primary arrest of growth of the interventricular septum of unknown origin, and it is worthy of note that the left is the larger ventricle.

The pleural sacs contain about a drachm each of clear serous fluid.

The lungs show livid areas of collapse disposed as follows:—The posterior part of the extreme apex, the lower part of the middle lobe excluding the tip, and an oblique tract in the middle of the lower lobe of the right lung; while in the left lung there is a tiny area at the apex, and a more extensive involvement of the posterior part of the lower lobe. The bronchi are rich in mucus. Histologically, the appearances of these areas are those of collapse of lung with marked congestion, indeed actual hæmorrhage at places, and slight intra-alveolar catarrh, an occasional alveolus even containing a fibrinous exudate. The most notable change in the bronchioles is the extensive mucoid transformation of the lining epithelium. Streptococci are scantily present within the bronchioles, none being visible within the alveoli themselves. Obviously the changes indicate a terminal lung involvement.

The diaphragm is normally formed. There is no peritoneal effusion. The abdominal viscera are in their usual situations. The liver weighs 9 oz., is of deep colour, and shows a cut surface finely mottled with minute pale points. The spleen weighs  $\frac{1}{2}$  oz., measures  $2\frac{1}{4}$  inches by  $1\frac{1}{4}$  inch, and is soft, the cut surface being pale and the Malpighian bodies prominent. The kidneys weigh  $\frac{3}{4}$  oz. each, measure  $1\frac{3}{4}$  inch long, and the cortex, which is slightly congested naked-eye, is  $\frac{1}{8}$  inch thick. There was no other noteworthy condition, and the head was not examined.

The systolic murmur, which was present on admission, may have been due to a relative mitral incompetence following a slight dilatation of the left ventricle, the result of muscular

atony. Pulmonary congestion would account for the cough. With improvement, which was marked after admission, the heart apparently regained its tone, for the cough was relieved, the murmur disappeared, and only a roughening of the first sound persisted, which may well be ascribed to the inter-ventricular opening. The attack of breathlessness with cyanosis and high fever, which heralded death, no doubt indicated an acute streptococcal invasion of the lung substance.

It will be remembered that this lesion is usually associated with the "Bruit de Roger." This abnormal bruit, according to Roger, "is a loud murmur, audible over a large area, and, commencing with systole, is prolonged so as to cover the normal tic-tac. It has its maximum, not at the base to the right, as in aortic stenosis, or to the left, as in pulmonary stenosis, but at the upper third of the precordial region. It is central, like the septum, and from this central point gradually diminishes in intensity in every direction. The murmur does not vary at any time, and it is not conducted into the vessels." A typical example of this condition in an adult was described by Cowan and Storey<sup>9</sup> in this *Journal* for 1909.

---

#### REFERENCES.

- <sup>1</sup> *Clinique Médicale de la Charité*, Paris, 1894, p. 55.
- <sup>2</sup> *System of Medicine*, Osler and Macrae, vol. iv, p. 349.
- <sup>3</sup> *Revue de Médecine*, T. 9, 1889, p. 993.
- <sup>4</sup> *Dublin Quart. Jour. Med. Sc.*, 1863, p. 112.
- <sup>5</sup> *Brit. Med. Jour.*, 9th December, 1871, p. 666.
- <sup>6</sup> *Medical Times and Gazette*, 9th January, 1875.
- <sup>7</sup> *Gazette des Hôpitaux*, No. 84, July, 1876.
- <sup>8</sup> Quoted in *Zeit. f. Khde. Ref.*, Bd. 4, p. 667 (*Il Morgagni*, Pt. 1, 54, 1912).
- <sup>9</sup> *Glasgow Medical Journal*, December, 1909.

(To be continued.)

---



AN EXPERIMENTAL STUDY OF EXTIRPATION AND  
TRANSPLANTATION OF THE THYMUS.

BY J. MILL RENTON, M.B., CH.B., F.R.C.S.E.,

Surgeon, Springburn Red Cross Hospital; Surgeon to Out-patients, Western  
Infirmary; and Extra Honorary Surgeon, Out-patients,  
Royal Hospital for Sick Children, Glasgow.*(From the Physiology Department, Glasgow University.)*

EXTIRPATION with or without subsequent transplantation has been widely used as a means of studying the ductless glands, and, in some of them, these methods have yielded valuable results, but, so far, they have failed to give any very definite information as regards the function of the thymus.

Removal of the thymus alone has been extensively carried out, but the results have been somewhat conflicting, and have varied in different hands, and according to the animal used. In some instances its removal has not produced any effect at all; and in others, where definite symptoms have been described, it has not appeared absolutely certain that these were really due to the loss of the thymus.

Transplantation has been attempted, but prior to 1912, when this work was commenced, and even more recently, no successful case could be found in the literature. In all the recorded instances the transplanted tissue has been gradually absorbed, or has broken down and become disintegrated. Klose and Vogt<sup>1</sup> have tried to produce hyperthymusisation without result. They consider that homoplastic transplantation is the least dangerous method of administering thymus in thymusless animals, but they found that the transplanted tissue disintegrated. Geble<sup>2</sup> found that transplantation into the abdomen did not hurt the animal, but the thymus atrophied and was slowly absorbed. Hart and Nordmann<sup>3</sup> found that the transplanted organs very soon degenerated and became absorbed.

The question of attempting to obtain successful transplantations of the thymus was first investigated. It was hoped that

if this could be carried out, it would prove useful as a means of corroborating the symptoms that have been described as following thymusectomy.

In considering this subject one has to remember that one is dealing with an organ whose function tends to diminish after birth, and is consequently, one would surmise, especially liable to undergo degeneration. Henderson<sup>4</sup> has shown that castration causes a persistence of the thymus, and consequently it was decided to do the transplantation, in the first instance, in castrated animals.

In guinea-pigs the thymus lies high up in the neck, and its complete removal is easy, so that from an operative point of view they are very suitable.

In the first three experiments the testes were removed, the thymus completely taken out, and a piece of one lobe transplanted into the tunica vaginalis. On examination from twenty to thirty days later no trace of the thymus was found.

Two transplantations into the abdomen were next tried, but in one there was complete degeneration a week later, and in the other twenty-one days later there was only a minute rind of thymic tissue left.

The *rectal sheath* was next tried, and here successful transplantations were obtained. The sheath was opened, and a space for the gland formed below the muscle in the sub-peritoneal tissue. The gland was placed in this, and the muscle united over it. Great care is necessary so as not to open the peritoneum, which is very fine. It was found that if the peritoneum was opened the transplant tended to absorb. On the other hand, if it was not placed below the muscle in the sub-peritoneal tissue, it did not grow so well.

The guinea-pigs were used as young as possible, but it was found that below 100 grms. they were very liable to die, and, also, the transplantation was very difficult. The testes were first removed, the bed in the rectus prepared, and, finally, the thymus completely removed and a piece transplanted.

After a little practice one gets a successful result in almost every case. At first there were a few failures owing to defective technique, opening peritoneum, &c., but finally six consecutive successful results were got. These were examined



from seventeen to eighty days after transplantation, and the graft was found to have normal thymus structures. In some cases the tissue could be distinguished to be glandular by the naked eye, but in others it was only on microscopic examination that one could be certain. The amount of tissue growing appeared only slightly less than that transplanted.

Transplantations were next tried in uncastrated guinea-pigs, and successful results were also got here.

Seven animals were operated on altogether—in four females

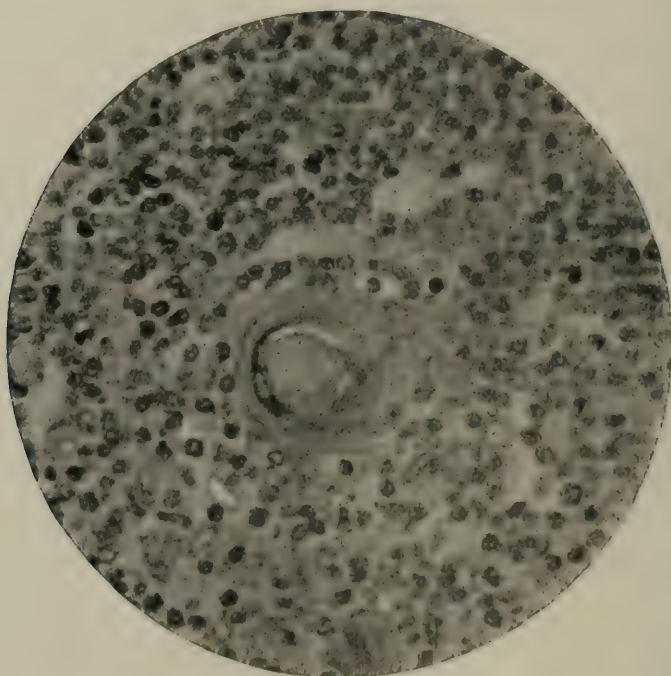


FIG. 1.

Transplanted thymus. Guinea-pig; testes removed; examined sixty days after operation.

and one male the thymus was found growing well thirty to sixty-five days after transplantation. In two males it did not grow so well, and only a few lobes of thymus were found at the end of forty days. None of these animals showed any abnormal results from the transplantation, and they grew at the same rate as the controls.

*Transplantation of the thymus from one guinea-pig to another.*—A few cases of this operation were done with the

view, first, of seeing if it were possible, and, secondly, if possible, to see whether any signs of hyperthymusisation would be produced.

The thymus was removed from one animal and part of it transplanted into the rectal sheath of another. This was done in animals as young as possible (from 60 to 90 grms. weight), and, consequently, one or two died shortly after operation. Of six animals in which transplantation was done three were followed to a conclusion. In two of them which had not been

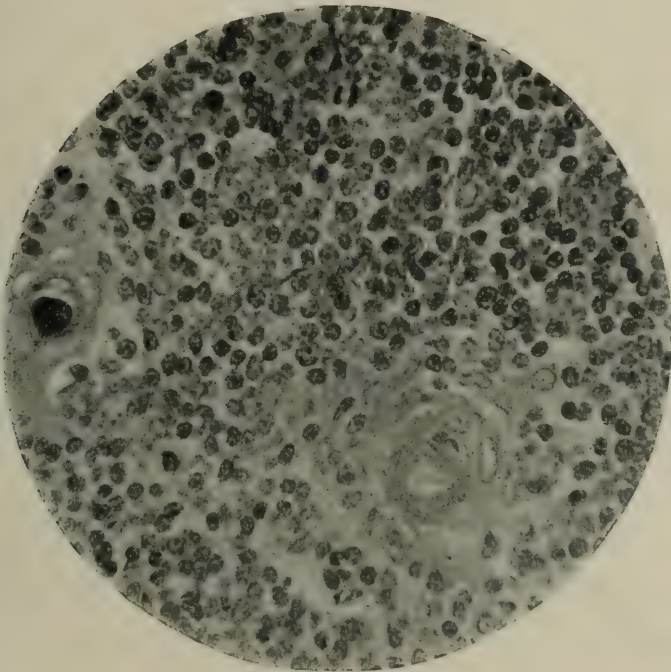


FIG. 2.

Transplanted thymus. Female guinea-pig; examined forty days after operation.

related to the donor a few lobes of healthy thymus tissue were found growing fifty-three days after operation. The amount growing, however, appeared a good deal less than that originally transplanted. In the third animal, which was sister to the donor, no trace of the thymus was found fifty-nine days later, but as the graft appeared to have slipped below the skin shortly after operation, that probably explained its absortion. None of these animals showed any symptoms from the transplantation, and they grew at the



same rate as the controls. The thyroids were found normal on examination.

There is thus no difficulty in getting the transplanted thymus to grow in castrated guinea-pigs if the transplantation is carried out as indicated. Further, it appears to grow just as well in uncastrated animals. While not sufficient transplantations from one guinea-pig to another were done to settle the point, in two cases a certain amount of the graft appeared quite healthy fifty-three days after transplantation,

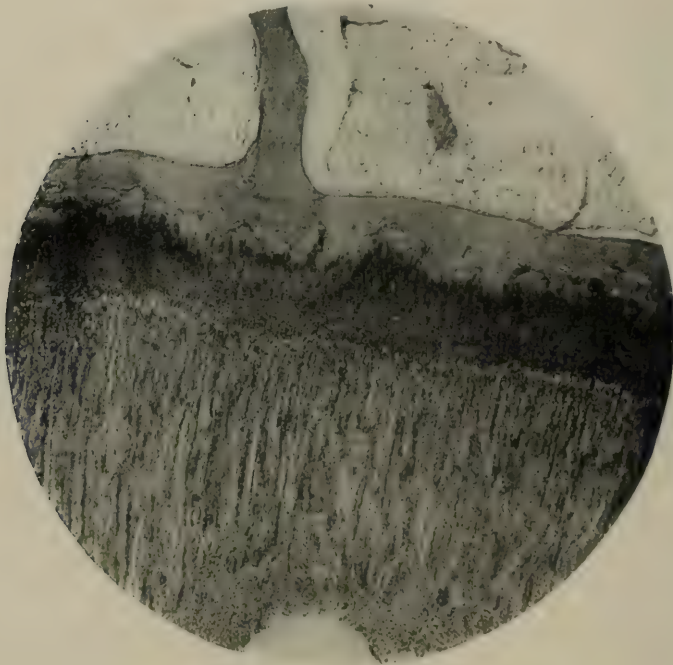


FIG. 3.

Rabbit; lower radial epiphysis eighty-four days after removal of thymus.

and no evidence of degenerating tissue was seen. None of the animals showed any symptoms from the transplantation.

Histological examination of the transplanted thymus showed a practically normal gland. There was no change found which might have thrown any light on the origin or character of the different cells.

Having obtained successful grafts, the question of whether they functionated naturally came up. To test this it was necessary to find an animal where removal of the gland

caused definite symptoms. The transplant, if it functionated, would prevent these symptoms developing, and, further, would confirm that the changes were really due to the removal of the thymus.

*Thymusectomy.*—Paton and Goodall<sup>5</sup> have shown that removal of the thymus in guinea-pigs does not cause any very definite symptoms. This was confirmed by me in ten experiments. No change was found in the rate of growth or

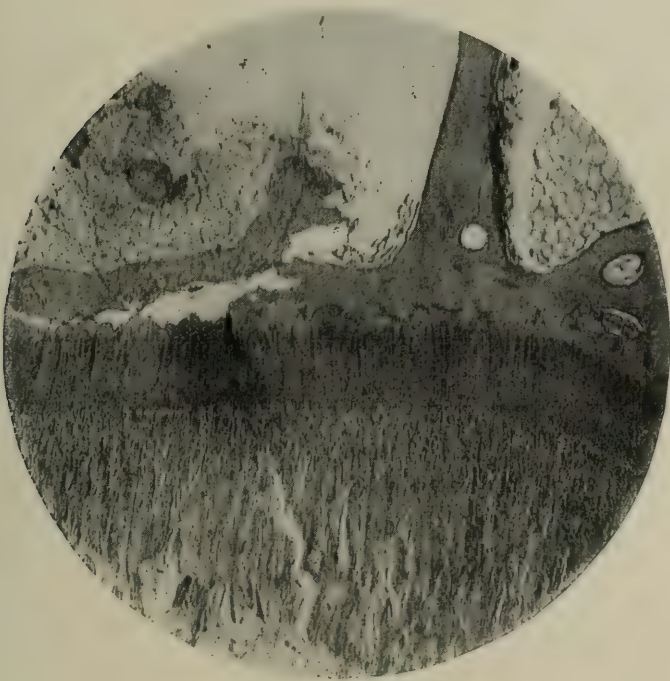


FIG. 4.  
Rabbit-control.

development. The thyroids were examined for changes, but nothing abnormal was noted. Undoubtedly now and then the thyroid of the operated animal was found more cellular than the control, but the same condition was found in other controls, so that it cannot be put down to the removal of the thymus. MacKenzie Douglas<sup>6</sup> has recently shown that changes in the structure of the thyroid similar to those described as due to thymusectomy occur as a result of the state of nutrition of the animal, and are dependent to a large extent upon its diet.



No accessory thymus was found in any of the thyroids examined.

MacLennan<sup>7</sup> has described a very definite increase in the rate of growth of rabbits who have had the thymus removed, as well as certain changes in the thyroids. Consequently it was hoped that by transplantation one might be able to prevent these changes, and thus see if the transplant functionated.

It was, however, necessary first of all to repeat his experiments, and see if these changes were constant.

The operation is of considerable difficulty in rabbits, as the thymus in them lies largely in the thorax and is closely connected with the large vessels and the pleuræ. In order to get at it, it is necessary to remove a part of the sternum. I found the technique described by MacLennan to be the best, namely, a median incision, exposure of the sternum and upper two ribs. Ligatures are then tied firmly round the ends of the ribs a short distance from the sternum, and left 6 inches long. The ribs are then divided between the ligatures and the sternum, and the sternum itself is then cut across. This gives a fairly good exposure of the gland. After the gland has been removed the ligatures are tied together, bringing the ends of the ribs into apposition, and the muscles are united. In a few weeks it is difficult by palpation to tell the operated animals from the controls.

The chief danger in removing the gland is pneumothorax. One practically always causes this on one side, but if it is only one-sided the animal usually recovers, while if double it invariably dies. At first the mortality is apt to be high, but after a little practice most of the animals survive the operation. The animals were operated on from 15 to 20 days old.

*Cases.*—1. Thymus removed. Killed seventy-seven days later. No change in rate of growth. Epiphysis appeared normal, and microscopical examination confirmed this. Thyroids also normal.

In this case a minute trace of thymus was found *post-mortem*, but it showed no signs of special regeneration, such as has been described by Friedleben.<sup>8</sup> The piece was very small, about

the size of a pin's head, but the result is consequently not conclusive.

2. Thymus removed. Killed sixty-four days later. No change in rate of growth, epiphysis or thyroids. No thymus *post-mortem*.

3. Thymus removed. Died nineteen days later. Had shown no change, and no thymus discovered *post-mortem*.

4. Thymus removed. Killed sixty days later. No change in rate of growth, epiphysis or thyroids. No thymus found *post-mortem*.

5. Thymus removed. Sixty-four days later killed and eaten by a dog, so that no microscopical examination could be made, but the animal had shown no change in rate of growth and no evident thickening of epiphysis.

6. Thymus removed. Killed eighty-four days later. No change in rate of growth, epiphysis and thyroids normal, and no thymus present on *post-mortem* examination.

In these experiments the controls belonged to the same family as the operated animals, and were kept under the same conditions.

Case 1 is not satisfactory on account of there being a trace of thymus left, Case 3 hardly lived long enough to show definite changes, and in Case 5 it is possible there may have been thymus left. The other cases, however, appear quite definite, especially Case 6, where the animal was kept alive for eighty-four days.

As regards the question of complete removal, a considerable number of animals died immediately or shortly after the operation; in all of these a careful examination was made to see if any thymus had been left, and without exception it was found to have been completely removed. Case 1 was one of the first cases done before one had attained the same proficiency.

The epiphyses of all the animals were carefully examined, and found absolutely normal both to the naked eye and by microscopical examination.

The thyroids showed no abnormal change, and no accessory thymus was found in any of them. In short, the operated rabbits appeared absolutely normal, and grew at the same rate as the controls.



These experiments appear to show that thymusectomy does not produce any definite symptoms either in rabbits or guinea-pigs. Consequently one has not been able to determine from them whether the transplanted thymus could functionate.

*Conclusions.*—1. In guinea-pigs the thymus can be readily transplanted into the animal from which it was removed.

2. In transplantations from one guinea-pig to another healthy thymus tissue has been found up to fifty-three days after transplantation.

3. The thymus is rapidly absorbed when transplanted to the peritoneum (abdomen and tunica vaginalis) or under the skin, but grows in the sub-peritoneal tissue.

4. No symptoms are caused by transplantation of the thymus.

5. It has not been possible to determine if the thymus transplant functionated even when it grew well.

6. Total removal of the thymus does not cause any apparent symptoms in young guinea-pigs and rabbits.

I am indebted to the Carnegie Trust for a grant towards the expenses of this investigation.

---

#### REFERENCES.

- <sup>1</sup> Klose and Vogt, quoted *Innere Sekretion*, Biedl, 1913.
  - <sup>2</sup> Geble, *ibid.*
  - <sup>3</sup> Hart and Nordmann, *ibid.*
  - <sup>4</sup> Henderson, *Journ. of Physiology*, 1904, p. 31.
  - <sup>5</sup> Noël Paton and Goodall, *Journ. of Physiology*, 1904, vol. xxxi, p. 49.
  - <sup>6</sup> MacKenzie Douglas, *Journ. of Path. and Bact.*, vol. xix, No. 3.
  - <sup>7</sup> MacLennan, *Trans. Glasg. Med.-Chir. Soc.*, vol. vii, p. 221.
  - <sup>8</sup> Friedleben, *Die Physiologie der Thymusdrüse, &c.*, 1858.
-

THE ETIOLOGY AND TREATMENT OF GASTRIC  
ULCER.

BY HUGH MORTON, M.D.,

Fellow of the Royal Faculty of Physicians and Surgeons, Glasgow ; Professor of  
Physiology, the Anderson College of Medicine, Glasgow ; Assistant  
Physician, Outdoor Department, Western Infirmary, Glasgow ; &c.*(Concluded from p. 389, vol. lxxxv.)*

*The treatment of gastric ulcer.*—In treating gastric ulcer one must consider three things—first of all, the general treatment of the patient ; secondly, the dietetic treatment ; and lastly, the medicinal treatment. We must aim at the complete cure of the condition, and also consider the steps necessary to relieve the individual symptoms and prevent the complications and sequelæ. In the discussion of the therapy of gastric ulcer we will, therefore, divide the subject and consider it under three heads—

- I. General treatment.
- II. Dietetic treatment.
- III. Medicinal treatment.

I. *The general treatment.*—We find that ulcers of the skin heal most rapidly under rest and careful nursing, and the same rule holds good in the treatment of gastric ulcers. We, therefore, put the patient to bed and keep him there, giving as far as possible physiological rest as well as physical rest to the organ. The length of time the patient is confined to bed varies with the opinion of the clinician. Thus Leube recommends rest in bed for ten days, but most clinicians recommend a much longer period. Schmidt and Ewald advise from fourteen days to three weeks. I find it very difficult to state beforehand how long the patient will be confined to bed, as the length of time depends on the depth of the ulcer, and whether it be a recent one or not, on the amount of bleeding, and the rapidity with



which the patient responds to the treatment. As a rule, I keep my cases strictly confined to bed till from seven to ten days after the last trace of blood can, by chemical means, be discovered in the stomach contents and the fæces. After that I allow them up for a little each day until they are able to remain out of bed for the whole day, when I allow them gradually to return to their business and former mode of life.

Some people, however, find it impossible to remain in bed on account of their business, or for other financial reasons, and if they have not had a severe hæmorrhage but only occult blood, then a modified rest cure can be given which, associated with proper dietetic and medicinal treatment, often ends in the complete cure of the ulcer. Those patients are advised to lie down for a short time before and after each meal, to masticate their food well and not to bolt it as they, in the great majority of cases, have been in the habit of doing. Should the bleeding still continue under this somewhat modified treatment, then it becomes incumbent on the patient to undergo the complete rest cure and sacrifice a little in the shape of business for the sake of his present health and ultimate recovery. Various reasons have been put forward to explain the relief derived from the bed rest, as the patient usually finds considerable relief from the recumbent position alone; but it is difficult to agree with any or all of the theories. Thus Agéron considers the relief of the symptoms is due to the removal of the weight on the greater curvature, while Schmidt states that the rest in bed throws out of effect the strain of the neighbouring organs. Whatever the cause be, the fact remains that the patient is, as a rule, greatly relieved by being put in the recumbent position, and the pain and discomfort usually return when he leaves his bed before the ulcer is completely cured.

Another point that calls for urgent treatment is the condition of the mouth and nasopharynx. Very often we find in those cases that the teeth are defective and require the attention of the dentist. When decayed teeth are present they act as a constant source of irritation, as well as being excellent incubators for the growth of organisms, and hence the individual sends his food into his stomach well mixed with micro-organisms; and when the teeth are defective and there

is pain on mastication he does not masticate his food well, and thus the food enters the stomach in an unprepared condition, and throws a greater strain on the already weakened organ. So that one of the first things to attend to in the condition is to have the defective teeth removed, and a well-fitting artificial set supplied. With a septic condition of the teeth is often associated a general inflammatory and irritated condition of the mouth and nasopharynx, all of which help to lower the resisting power of the individual, and thus further reduce the quality of the blood which is supplying the gastric mucous membrane. The necessity of cleansing the mouth and nasopharynx becomes evident from these considerations.

It is not an uncommon statement to get from a patient that when the pain is bad a hot application, such as a poultice or a hot water bag, greatly relieves it; but as it is just as likely as not that the pain would be relieved by rest in bed without a hot application, I never employ one. Some consider the benefit derived is due to the local hyperæmia produced, others to the effect on the general tonicity, but I am inclined to think it is due to the enforced bed rest at the time. Thus in December, 1912, I had a patient who complained of acute agonising pain in the epigastrium shooting through to the back and up between the shoulders. The pain was of twelve years' duration, and was only relieved by going to bed with a hot water bag on his abdomen or across his back just behind the epigastrium, or when he was in his office by placing a couch near the fire and lying on it with his back to the heat. I put him to bed for a month, during which time he had no pain and was discharged from the Home cured. He remained well with the exception of one relapse following the eating of a pound of chocolates and a quarter of a pound of spiced gingerbread. All the time he was in the Home he had no hot applications of any kind and did not feel the need of any. Some find no relief from hot applications, but prefer cold ones, cold compresses over the epigastrium, or ice bags; but these, too, can be dispensed with. The constant use of poultices produces an ugly pigmentation of the abdomen, and on account of that Ewald now never orders them and does not find any deleterious results from their disuse.



The condition of the bowels must also be considered in the general treatment of gastric ulcer. Ewald pays little or no attention to this, although constipation is common in such cases. He only produces an evacuation every second or third day by lavage, but in my opinion the bowels should move every day. This usually takes place naturally when the hyperacidity is neutralised by the dietetic and medicinal treatment; but should this not be sufficient, then a soap and water enema can be given till all the hard scybalous masses are removed, or a little cascara sagrada and glycerine, or one of Burroughs Wellcome & Co.'s Vegetable Laxative Tabloids. Regarding the use of mineral waters, such as Carlsbad and Vichy, if used at all, they are more suitable for the after-treatment than for that of a fresh ulcer, and will be mentioned under the heading of medicinal treatment.

II. *The dietetic treatment.*—A commonsense ulcer diet must fulfil the following demands:—

1. It must produce the least possible mechanical stimulation of the stomach—that is, it must neither irritate the ulcer nor cause further dilatation of the already dilated stomach.
2. It must produce the least possible gastric secretion.
3. It must counteract the acidity as much as possible.
4. It must supply to the system, already weakened by bleeding and improper diet, rich nourishing food in order to strengthen the body, and to give the ulcer the best possible chance of healing.

The attempt to find the best method of fulfilling those four demands has formed the life work of many physicians. Widely varying diets have been given, and scarcely a year passes without an addition to their number, thus showing that all the demands have not yet been quite satisfactorily dealt with. When Cruveilhier first described the condition of gastric ulcer he stated that the best food for the purpose of feeding, and at the same time curing the condition, was milk, and since that time milk has held its own as one of the outstanding ideal foods for gastric ulcer patients; but, in order to supply the necessary amount of heat and energy, the system requires a very large amount of milk to be taken, and its good qualities

would be nullified by the distention of the stomach which the large amount of fluid necessary would produce. Hence we find the various investigators advocating their own special food combinations, which each holds is the best for the weakened organ. There are two methods, representing two different schools, of which I first of all wish to give a brief account, and then I shall state what method I usually follow in the dietetic therapy of gastric ulcer. Firstly, I would draw attention to the Leube-Ziemssen method. This is the one usually followed by Ewald in his cases. The followers of this

## LEUBE-ZIEMSEN METHOD.

DAYS,	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Nutrient enemata,	3	3	3	2	..	..	..	..	..	..	..	..	..	..	..	..
Cream (in c.cm.), .	..	..	..	..	..	..	..	..	..	..	200	200	200	200	200	200
Milk (in c.cm.), .	..	..	..	450	700	700	1000	1400	1500	1500	1300	1300	1300	1300	2000	2000
Eggs, . . . .	..	..	..	..	1	2	3	5	5	5	5	3	2	2	4	4
Soup (in c.cm.), .	..	..	..	..	..	..	..	100	100	300	500	500	500	300	300	300
Grated ham (in grammes), .	..	..	..	..	..	..	..	35	35	35	35	50	50	75	75	75
Grated veal (in grammes), .	..	..	..	..	..	..	..	..	50	50	50	50	50	75	50	75
Rusks, . . . .	..	..	..	..	..	..	..	..	..	..	..	3	3	5	6	6
Semolina or rice, .	..	..	..	..	..	..	..	..	..	75	75	100	100	100	100	200
Puree of potato, .	..	..	..	..	..	..	..	..	..	..	..	100	100	100	100	100
Vegetables (spin-ach), .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50
CALORIES,	400	400	400	581	561	632	913	1465	1535	1668	2083	2176	2105	2132	2350	2380

method aim at giving complete rest to the stomach by giving nothing by the mouth for the first three days of the treatment. They endeavour to supply the heat and energy the body requires by giving rectal enemata for the first three days after the hæmorrhage, and on the fourth day they begin oral feeding. But do they give physiological rest to the stomach by rectal feeding? Pavlov has proved that the sight or smell of food stimulates the gastric secretion in the dog, and he has been able by means of the gastric fistula to collect the gastric juice which has been secreted by the mere sight or smell of



food. In man the same holds good, as is shown by the secretion of saliva when an appetising dish is seen, smelt, or even thought of, and by the feeling of hunger such a dish produces. Those patients feel hungry, and with the feeling of hunger comes the secretion of the gastric juice preparing for the reception of the meal. Again, we have seen in the etiology of the condition that gastric succorrhœa, or a constant flow of gastric juice, is not uncommon in cases of gastric ulcer, and, therefore, how can the followers of this method give the necessary physiological rest to the stomach by substituting rectal for oral feeding? Leube and his school use the accompanying table (p. 27) in all their cases of gastric ulcer.

As is seen in the table, they give no food by the mouth for the first three days. As a substitute for oral feeding they first of all tried to feed by the skin. This they found to be exceedingly difficult on account of the difficulty and slowness of absorption. They succeeded in proving that certain substances, such as oil, were absorbed, but with albumin absorption was practically nil, and with carbohydrates it took place only to a very slight degree. They then tried the subcutaneous injection of oil, but on account of the pain it caused, and the difficulty of the operation, they soon gave it up, and tried to feed by nutrient enemata. They also tried solid suppositories, but on account of the large intestine being the place where water is absorbed, and not the solid products of digestion, they soon gave up the meat and solid suppositories—which they often found lying in the intestine unaffected on *post-mortem* examination—and applied themselves to preparing fluid substitutes more or less predigested in the shape of nutrient enemata. They found that undigested albumin, if absorbed at all, was absorbed in much too small an amount to make it of any real value as a food. They then made a compound enema including albumin, carbohydrates, and water. They found that by far the most beneficial enemata were those of eggs and milk which had been partially digested. Leube recommended the addition of finely chopped pancreatic gland to the enema. Later it was found that carbohydrates in the form of starch, which is converted into sugar in the rectum, could be used, or a solution of sugar could be added; but sugar acts as an irritant,

and often causes trouble. It is a well-known fact that hunger is much better endured when a plentiful supply of water is given to the patient, and hence the water in the enema was a most important constituent. A little sodium chloride is always added, as not only does it supply the demand of the body for sodium chloride, but it also greatly increases the absorption of the food material.

The various investigators have used different enemata; thus, Leube used pepton, eggs or starch, and milk. Ewald always uses the following:—250 c.cm. milk, 2 eggs, 5 grms. plasmon, NaCl about as much as will lie on the point of a knife, and 5 grms. grape sugar. He administers the enemata two or three times a day, and when necessary adds a few drops tinct. opii to prevent peristalsis and their ejection. His procedure is as follows:—The first thing in the morning the bowel is thoroughly cleansed with a soap and water enema, and then the nutrient enemata are begun. With this treatment there is usually a progressive loss of weight, and frequently symptoms of auto-intoxication appear with symptoms of acidosis. Acetone is abundantly found in the urine, and a strong odour of it is got from the breath. But above all, the great objection to this method is that, besides being very objectionable to the patient, it certainly does not produce the physiological rest to the stomach which is the excuse for its use. It allows the juice to pour over the ulcerated surface, without having any food to absorb it or partially neutralise it. Normally, mastication produces a stimulation of the parotid gland, but in this method the stimulus is absent, and parotitis often results.

The rest of the method is according to the table, which is also open to objection, as it is simply impossible to treat patients in this routine fashion as if they were so many test-tube experiments, and the individual peculiarities of the patient could be neglected. Each case requires individual treatment. To attempt to treat gastric cases in this hard and fast method independent of the daily developments of the case is absurd.

The fact that the above method did not nourish the body either during the period when only the nutrients were being administered nor at the beginning of the oral feeding caused Lenhartz to try another dietetic scheme for the feeding of ulcer



patients, and at the Congress for Internal Medicine at Wiesbaden in 1901 he strongly protested against the rectal feeding, and advocated oral feeding from the first day of the hæmorrhage. The following is the dietetic table advocated by him:—

ORIGINAL LENHARTZ DIET.

DAYS,	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Eggs, . . . . .	2	3	4	5	6	7	8	8	8	8	8	8	8	8
Sugar with eggs (in grms.),	..	..	20	20	30	30	40	40	50	50	50	50	50	50
Milk (in c.cm.), . . . . .	200	300	400	500	600	700	800	1000	1000	1000	1000	1000	1000	1000
Raw scraped beef (in grms.),	..	..	..	..	..	35	70	70	70	70	70	70	70	70
Milk and rice (in grms.), .	..	..	..	..	..	..	100	100	200	200	300	300	300	300
Rusk (soaked), 1 piece = 20 grms., . . . . .	..	..	..	..	..	..	..	1	2	2	3	3	4	5
Raw ham (in grms.), . . .	..	..	..	..	..	..	..	..	..	50	50	50	50	50
Butter (in grms.), . . . .	..	..	..	..	..	..	..	..	..	20	40	40	40	40
CALORIES,	280	420	637	777	956	1135	1588	1721	2138	2478	2941	2941	3007	3073

In his method of treatment he aimed at:—

1. Rapidly nourishing and improving the general condition of the patient in order to favour the more rapid healing of the ulcer.

2. Preventing distension of the stomach by limiting the size of the meal and the amount of fluids, and by the application of ice to the epigastrium.

3. Preventing the action of the excess of hydrochloric acid by combining it with food albumen and bismuth.

He, therefore, started oral feeding at once, and administered concentrated foods rich in albumen. He gave no food during the night, but hourly from 7 A.M. to 9 P.M. gave iced raw eggs and milk. The iced eggs and milk were administered by the nurse, a teaspoonful at a time, and the patient was not allowed to feed himself for a fortnight. On the third day of the treatment granulated sugar was added, and, later, raw scraped beef, boiled rice, and soaked rusks were also given. By this method the symptoms rapidly disappear, the sour regurgitations subside, vomiting and bleeding stop more quickly, and a

relapse is less frequent, while the pain ceases early and morphia is never required. The patient, who was collapsed before, soon begins to take an interest in himself and others, the pulse becomes stronger and more regular, the eyes clearer, the brain less lethargic, and the colour gradually returns to the lips and mucous membranes.

These two methods are the foundations on which all other observers have built, making modifications here and there, but without making any essential change. After working with Ewald in the Augusta Hospital in Berlin, where I not only was able to see the method he employed, but also to follow up his results in the outdoor department of the hospital, I became more and more convinced that the enemata he administers do not grant the physiological rest to the stomach that Leube, Ewald, and their followers claim they do. Their patients are hungry, feel hungry, and complain of pain and discomfort, and certainly do lose weight on the treatment. They have a very long convalescence, and not infrequently a recurrence of the hæmorrhage shortly after leaving hospital. The consequence is that I never starve the patient, nor do I waste valuable time and further reduce the already weakened individual by the so-called nutrient enemata, but administer egg albumen by the mouth from the beginning.

When hæmorrhage is taking place iced egg albumen and milk is given, or if the patient objects to milk, egg albumen water. Two drachms to half an ounce are administered every half hour during the day, and as the strength of the patient increases the albumen in the mixture is increased till he is getting from eight to twelve eggs per day. One usually finds that by this treatment the patient has added from one to four pounds to his weight during the first week, and as the treatment progresses the weight of the patient increases steadily, till by the end of the fourth week from twelve to fourteen pounds have been added. Being on a hæmoglobin-free diet, the stools can be frequently examined for occult blood, and the diet is not altered till from three to five days after the last trace of blood is gone, and the further dietetic and medicinal treatment is guided and controlled by repeated analysis of the gastric contents. Then we begin the after-treatment of the case, gradually adding to



the diet till a fairly full diet is being taken. We usually begin the after-treatment by giving a little Sister Laura's Food or a little Benger's, and later a little milk pudding can be added such as farola, sago, tapioca, whole rice, baked custard, curds and cream, &c. Toast and fresh butter is then given with caution, and perhaps a little freshly infused weak tea with no sugar but a large amount of cream. White fish is then added, being at first boiled or steamed, and later it can be given fried provided it be fried in butter or margarine and not in lard or one of the other animal fats. Then can be added, as the analysis indicates, a little of the breast of a boiled chicken, and later a small underdone grilled fillet steak, all the fat having been previously removed, and the steak basted with butter or margarine. The reason for having the steak cooked on the surface only is that the albumen of the meat has been then raised only to a temperature of from 170° F. to 180° F., so that it is sufficiently cooked but not over-heated or hardened. Should the temperature be raised over 180° F. it tends to solidify the albumen and harden it, and thus make it more difficult to digest, or, in other words, throws a bigger strain on the digestive organs. Lean under-cooked mince can also be given, and a piece of boiled shoulder of mutton. A baked apple can then be added, but no sugar should be added to it, and gradually the patient is put on a diet with only the stimulating articles withdrawn. The dishes I always advise them to avoid are the soups, including beef-tea, Lemco, Oxo, and all meat extracts; the fat of butcher's meat; the root vegetables, such as potato, carrot, turnip, and parsnip; excess of sugar and salt; and all the condiments, such as mustard, pepper, pickles, &c. Alcohol in all forms should be prohibited. On account of cutting out of the diet all animal fats, the vegetable fats are given instead. Hence the patient is advised for some months to take ground almonds or hazel nuts, and three times a day before each meal a teaspoonful, gradually increasing to a tablespoonful, of the best French or Italian olive oil. Should he object to the oil, it can be flavoured by adding an ounce of peppermint oil to every ten ounces of the olive oil. If pure olive oil be given it has no taste, and does not repeat, but the ordinary oil sold by the chemist as olive oil is really cotton seed oil, and not only is not tasteless, but very

frequently repeats. Instead of potato, boiled rice or macaroni can be given.

III. *The medicinal treatment.*—In the medicinal treatment we aim at coating the ulcer, neutralising the excess of free hydrochloric acid, and at preventing the excretion of so large a quantity of hydrochloric acid. Of all the medicaments used in gastric ulcer perhaps the oldest and most commonly used is one of the salts of bismuth, which is said to lie on the surface of and prevent the hydrochloric acid irritating the ulcer. Any of the bismuth salts can be used. Some people prefer one salt, some another. Ewald usually prescribes the subnitrate, while most clinicians prefer the carbonate on account of it being less toxic, and hence more easily borne by the patient. Others prefer the salicylate on account of its antiseptic effect, but it is really a matter of indifference which is used, as it is generally given to coat the ulcer, and not for its antiseptic effect. It is not positively known how the effect is produced, but any of the bismuth salts is remarkably efficient in removing the pain of gastric ulcer, and it is only presumed that it is by its mechanical effect more than by its chemical—in other words, that by coating the ulcer it prevents the acid juice getting at and irritating the raw surface.

Some recommend the use of soda bicarb., and the number of people who take it whenever they feel any discomfort in the stomach is remarkable; but of all the drugs used in gastric treatment soda bicarb. is one of the most harmful. Undoubtedly it neutralises the acid, but it increases any tendency there is to flatus, and its after-effects are very deleterious, as it stimulates the further secretion of hydrochloric acid, which is just the very thing we wish to avoid. Sodium citrate is sometimes used with considerable benefit, as it cleanses the mucosa while acting as an anti-acid. The object is only to neutralise the excess of acid and not to render the gastric juice alkaline, and for that purpose one of the salts of magnesium is found to be by far the most satisfactory. Either the oxide of magnesium or the heavy carbonate will do. In order to depress the secretion of hydrochloric acid, a little extract of belladonna or atropine can be given. The dose to be administered depends on



the amount of hydrochloric acid present, as found out by an analysis, after a test breakfast. The drug can be administered either just before the meal or from an hour and a half to two hours after the meal; that is to say, when the digestion and secretion is at its height. I prefer to administer it before the meal, as the patient is more likely to take it regularly then, and when back at business can continue the treatment as long as is necessary.

If the patient be very thin, and there be marked malnutrition, the tissues can be stimulated to activity and marked improvement noted by the injection twice a week, under the shoulder-blade, of 5 c.cm. of Oppenheimer's sea water plasma diluted with 5 c.cm. sterile water. Under this treatment it is surprising with what rapidity those patients respond. Should there not be much bleeding, but only occult blood present, then I find nothing heals the ulcer quicker than gentle lavage with a solution of 1 in 1,000 silver nitrate. It stimulates the secretion of mucus, and, indeed, produces a mucous catarrh of the stomach, which coats the ulcer and protects it much better than the bismuth does, and thus hastens the cure. Indeed, in every case of gastric ulcer as soon as it is considered advisable to pass the tube I begin the treatment with silver nitrate. On account of the tendency to argyria I only use it for ten days, then give seven days' rest, during which a solution of sodium hypobromite, half an ounce to the pint, is used, and at the end of that time the silver nitrate can be repeated if necessary; but it is the exception to find it necessary.

Some recommend the use of the mineral waters of Carlsbad or Vichy to be taken with meals, but I never do, on account of the tendency to over-distend the stomach, and as they are not foods they really are not necessary. Besides, the oil and nuts prevent the acidity to a great extent, and keep it under proper control. Again, the oil and nuts not only feed the patient, but act as mild laxatives and keep the bowels in good working order.

Should there be much ptosis due to atony of the stomach wall I always give a pill three times a day containing muscle stimulants. By far the most efficacious is one of the preparations of Calabar bean. The preparation I usually use is eserine

salicylate, and I usually combine it with other stimulants for the involuntary muscles. The pill I never give till after all bleeding has ceased.

On account of the anæmia one of the preparations of iron is necessary, and as the oral administration of iron not only upsets the digestion but interferes with the gastric analysis—our dietetic guide—1 c.c. of Molteni's preparation of the citrate is administered intramuscularly once a day to begin with, and then morning and evening.

Once the bleeding is stopped, and the patient is beginning to improve, the muscle tone of the intestine is improved by gentle massage, used with caution. Once he is able to leave bed and take a little exercise he is advised to do exercise No. 3 in Müller's little book, *My System*. Only exercise No. 3 is done to begin with, but later on as his strength becomes greater the exercises are increased till he is doing all Müller's exercises. In this way he not only gets well, but the exercises help to keep his system up to standard and prevent him falling back into his old somewhat careless ways, and complete and confirm the cure.

---



## Obituary.

---

JOHN HEPBURN LYELL, M.D. GLASG.,  
PERTH.

WE regret to announce the death of Dr. J. H. Lyell, of Perth, which occurred on 12th May, after an illness of some months' duration. A native of Newburgh, Perthshire, Dr. Lyell was educated at Perth Academy, and studied medicine at St. Andrew's and Glasgow Universities, taking the degrees of M.B., C.M. Glasg. in 1896, and that of M.D. in 1901. After graduation he became house surgeon to Perth Royal Infirmary, and, settling in the city, he soon acquired a prominent position. He was appointed visiting physician to the Royal Infirmary, to which he also acted as radiologist and medical electrician. At one time he held the appointment of assistant medical superintendent to Perth Prison. He was for some years secretary of the Perth Branch of the British Medical Association, and he was also joint secretary to the Local Medical and Panel Committees of Perth and Perthshire. He contributed several papers of clinical interest to the *British Medical Journal*, and others on scientific subjects to the *Transactions* of the Perth Natural Science Society, of which he was a member. He is survived by a widow and three children.

---

JOHN SERVICE, L.R.C.P. & S.ED.,  
SYDNEY.

WE regret to announce the death of Mr. John Service, which occurred at Sydney, New South Wales, about the middle of May. A native of Kilwinning, where he was born in 1851, Mr. Service was a student both of the arts and medical faculties in the University of Glasgow, gaining distinction in the class of English Literature. He took the qualification of the Royal

College of Physicians and Surgeons of Edinburgh in 1878, and earned for himself in Sydney, where he practised medicine, a distinguished place in his profession. His mind, however, was given at least as much to literature. He was an authority upon the Scottish language of a century and a half ago, and many of the words and phrases in his sketches of Scottish social life are quoted in the Oxford Dictionary and in the Dialectic Dictionary of Professor Wright. On account of his services to literature, the Commonwealth Government granted him a literary pension.

---

HUGH WHITE, M.B., CH.B. GLASG.,  
DEVONPORT.

WE regret to announce the death of Mr. Hugh White, which occurred on 24th May at his house in Devonport. Mr. White, who was a native of Dreghorn, received his medical training at Glasgow University, where he took the degrees of M.B., Ch.B. in 1909. Thereafter he filled the position of senior house physician and house surgeon in the General Hospital at Kettering, and was subsequently appointed surgeon at the Devonport Royal Albert Hospital. He was eminently successful in private practice in Devonport, and his early death has cut short a career of much promise.

---

HUGH M'NAUGHT, M.B., CH.B. GLASG.,  
GATESHEAD.

WE regret to announce the sudden death of Mr. Hugh M'Naught, which took place at Gateshead on 3rd June at the early age of 32 years. As a student of the University of Glasgow Mr. M'Naught gave promise of exceptional ability. He took the degrees of M.B., Ch.B. in 1908, and four years later he settled in Gateshead, where he speedily made his mark, acquiring in the course of four years an extensive practice, and leaving behind him memories and regrets that will not soon be forgotten.



SAMUEL F. M'LACHLAN, M.B., C.M. GLASG.,  
LONGTOWN.

WE regret to announce the death of Mr. S. F. M'Lachlan, of Longtown, Cumberland, which occurred on 9th June. Mr. M'Lachlan, who was a native of Dumfriesshire, was a student of Glasgow University, where he took the degrees of M.B., C.M. in 1873. After a brief period in Manchester, he settled in Longtown in 1879, and remained in practice until he was compelled by failing health to retire in 1914. In this period of thirty-five years he had built for himself a reputation which extended over the northern half of the county, where he was held in the highest regard both as a man and a physician. For over thirty years he was medical officer of health for the Longtown district, and he held numerous medical appointments, among them that of medical officer to the Post Office. His practice was large, and occupied much of his time, but it did not suffice to exhaust his activities: He kept himself abreast of modern science and culture, and he was a devoted student of literature. In 1907 he was appointed a Justice of the Peace for the County of Cumberland, and he regularly attended Petty Sessions. He is survived by a widow and one son.

---

## CURRENT TOPICS.

---

**CORRECTION.**—In the article by Dr. H. P. Fairlie—"A Series of 800 Cases with the Vernon Harcourt Chloroform Inhaler"—which appeared in our last issue, Fig. 7 was described as Hewitt's air-way prop. It should have been stated that it represented Mr. M'Cardie's prop, as manufactured by Messrs. Down Brothers. The author asks us to express his regret for the inadvertent mis-statement.

**APPOINTMENTS.**—The following appointments have recently been made:—

J. S. Christie, M.B., C.M.Glasg. (1897), to be Medical Officer of Health for the parish of Campsie.

*Royal Navy* (29th May): Temporary Surgeon J. D. Milligan, M.B., Ch.B.Glasg. (1915), to *Pembroke*, additional.

*Royal Army Medical Corps* (24th May): To be temporary Captains—Temporary Lieutenants C. C. Finlater, M.D.Glasg. (M.B., 1903); J. M. Mackay, M.B., Ch.B.Glasg. (1915); D. M. M'Intyre, M.B., Ch.B.Glasg. (1915); J. H. N. F. Savy, M.B., Ch.B.Glasg. (1910); G. T. M'Lean, M.B., Ch.B.Glasg. (1900); S. V. Telfer, M.B., Ch.B.Glasg. (1910); A. M. Clark, M.B., Ch.B.Glasg. (1915); W. Wallace, M.D.Glasg. (M.B., 1887); T. F. B. Reid, M.B., Ch.B.Glasg. (1914); R. A. M. Macleod, M.D.Edin. (Cathcart); A. D. Blakely, M.B., Ch.B.Glasg. (1914); W. S. Stalker, M.D.Glasg. (M.B., 1899); J. B. Baird, M.B., Ch.B.Glasg. (1910); J. J. Robertson, M.B., C.M.Glasg. (1900); J. Coutts, M.B., Ch.B.Glasg. (1906); R. M'N. Marshall, M.D.Glasg. (M.B., 1900); E. T. Roberts, M.D.Edin. (Glasgow).

*25th May*: To be temporary Lieutenants—F. R. Wilson, M.B., Ch.B.Glasg. (1907); G. W. Ronaldson, M.B., Ch.B.Glasg. (1916); W. M'Adam, M.D.Glasg. (M.B., 1909), B.Sc.; G. Arthur, M.B., Ch.B.Glasg. (1900); J. A. Hope, M.B., C.M.Glasg. (1896).



*26th May:* Army Medical Service—Surgeon-General Sir W. Bap-  
tie, V.C., K.C.M.G., C.B., M.B.Glasg. (1880), to be a Director  
of Medical Services at the War Office.

*29th May:* To be temporary Captains—Temporary Lieutenants  
J. M. Macphail, M.D.Glasg. (M.B., 1889); J. D. Mackinnon, M.B.,  
Ch.B.Glasg. (1911); J. C. Turnbull, M.D.Glasg. (M.B., 1900);  
D. M'F. Livingstone, M.D.Glasg. (M.B., 1900); J. W. Sutherland,  
M.B., Ch.B.Glasg. (1903); H. Yellowlees, M.B., Ch.B.Glasg.  
(1910).

*2nd June:* To be temporary Captain—Captain G. H. Clark,  
M.D.Glasg. (M.B., 1901), unattached list T.F. To be temporary  
Lieutenants—A. Morton, M.B., Ch.B.Glasg. (1916); T. S. Paterson,  
M.B., Ch.B.Glasg. (1916); W. J. Poole, M.B., Ch.B.Glasg. (1916);  
W. M. Stewart, M.B., Ch.B.Glasg. (1916); J. L. Torley, M.B.,  
Ch.B.Glasg. (1916); R. Lindsay, M.B., Ch.B.Glasg. (1916); J. W.  
Macfarlane, M.B., Ch.B.Glasg. (1916); D. M'Laren, M.B., Ch.B.  
Glasg. (1916); F. R. Martin, M.B., Ch.B.Glasg. (1916); W. W.  
Morrison, M.B., Ch.B.Glasg. (1916); D. H. Coats, M.B., Ch.B.  
Glasg. (1916); W. K. Connell, M.B., Ch.B.Glasg. (1916); W. D.  
Allan, M.B., Ch.B.Glasg. (1916); A. S. Cook, M.B., Ch.B.Glasg.  
(1916).

*7th June:* To be temporary Lieutenants—J. N. Cruikshank,  
M.B., Ch.B.Glasg. (1916); A. Davidson, M.B., Ch.B.Glasg. (1916)  
J. B. Fisher, M.B., Ch.B.Glasg. (1916); M. M. Frew, M.B., Ch.B.  
Glasg. (1916); T. R. Fulton, M.B., Ch.B.Glasg. (1916); G.  
Kirkhope, M.B., Ch.B.Glasg. (1916); J. S. Kinross, M.B., Ch.B.  
Glasg. (1916); D. W. Smith, M.B., C.M.Glasg. (1901).

*9th June:* To be temporary Captains—Temporary Lieutenants  
W. H. M'Kinstry, M.B., C.M.Glasg. (1887); T. M'Kinlay, M.B.,  
Ch.B.Glasg. (1910); J. M'Queen, M.B., Ch.B.Glasg. (1897); A. N.  
Millar, M.B., Ch.B.Glasg. (1913); A. B. M'Pherson, M.B., Ch.B.  
Glasg. (1904); H. K. Wallace, M.D.Glasg. (M.B., 1896); B. M.  
Hunter, M.B., Ch.B.Glasg. (1909); J. R. Burns, M.B., C.M.Glasg.  
(1897); G. J. Fraser, M.B., Ch.B.Glasg. (1915); R. M'Lean, M.B.,  
Ch.B.Glasg. (1913); M. M'Nicol, M.D.Glasg. (M.B., 1893); T.  
Kirkwood, M.B., C.M.Glasg. (1892); W. H. Brown, M.D.Glasg.  
(M.B., 1901); A. S. Richmond, M.B., Ch.B.Glasg. (1911); M.  
Manson, M.B., Ch.B.Glasg. (1911); J. S. Stewart, M.B., Ch.B.  
Glasg. (1914).

*13th June:* Temporary Hon. Lieutenant E. M. Eaton, M.B.,

Ch.B.Glasg. (1906), to be temporary Hon. Captain whilst serving with No. 2 British Red Cross Hospital.

*R.A.M.C., Territorial Force* (23rd May): Lowland Mounted Brigade Field Ambulance—Captain (temporary Major) R. Y. Anderson, M.B.Edin. (Ibrox), to be Major.

APPOINTMENT FOR COLONEL SIR W. B. LEISHMAN.—Colonel Sir William B. Leishman has been appointed a member of the new Council of the Medical Advisory Board in France. The Council has for chairman the Director-General, Surgeon-General Sir A. T. Sloggett; for vice-chairman Surgeon-General T. B. Woodhouse; and six members, among whom is Colonel Sir W. B. Leishman.

HOSPITAL FOR LIMBLESS SAILORS AND SOLDIERS.—From the inception of the scheme for the establishment of the Princess Louise Scottish Hospital for Limbless Sailors and Soldiers, of which an account was given in our May issue, the sympathies of the public have been strongly enlisted in its favour, and subscriptions have flowed in with great rapidity. The committee were fortunate in the gift of Erskine House, through the generosity of Mr. Thomson Aikman, for the period of the war and twelve months thereafter, and they secured an option for acquiring the house and certain land about it on moderate terms. It was announced on 16th May, at a meeting held in the City Chambers, that a public-spirited citizen, who had been generously met by Mr. Thomson Aikman in regard to terms, was willing to present the house, along with grounds amounting to about 350 acres, to the Hospital as its own property. The committee decided to accept the handsome gift, and cordially to thank the donor, who desired in the meantime to remain anonymous.

Among the subscriptions intimated towards the end of May was the sum of £500 "in memory of Charles Stuart, Lord Blantyre," from his daughters, Lady Baird and the Hon. Mrs. W. H. Gladstone; and the Provost of Ayr sent £850, being the first instalment of a collection and flag day held in Ayr in aid of the funds of the Hospital. A sale of flowers in the streets of Glasgow for the same object was held on 27th May, and realised £143, while the proceeds of the special matinee, held



in the Alhambra Theatre on 9th May, amounted to £650. A special appeal on behalf of the Hospital was issued early in June by the Lord Provost, president and chairman of the Executive Committee; Mr. John Reid, vice-president; Sir William Macewen, vice-chairman; and Mr. David M'Cowan, convener of the Finance Committee. It stated that the Hospital would be ready for occupation on an early date, and would accommodate about 200 patients. It would receive, so long as the patients had not been discharged from the Service, a capitation grant from the Government for every case dealt with, and would receive assistance towards the expense of artificial limbs. Provision must, however, be made for a considerable period, as the Hospital would be required for limbless and maimed sailors and soldiers for some years after the declaration of peace. The scope of the committee's operations and their power to relieve suffering would be limited only by the amount of money subscribed. Along with the appeal was issued a copy of the letter written by the Princess Louise, Patron of the Hospital, to the Lord Provost in support of the claims of the institution.

The total sum subscribed up to 15th June amounted to £81,758, 17s. 6d.

GLASGOW DEAF AND DUMB MISSION.—The annual general meeting of the Glasgow and West of Scotland branch of the Mission to the Deaf and Dumb was held on 25th May in the Royal Institute for Deaf and Dumb, 158 West Regent Street, Glasgow. Sir Archibald Campbell, Bart., of Succoth, presided. The annual report showed that the income during the past year was £936, and the expenditure £923. During the year work had been found for sixty-nine deaf and dumb persons, and the other agencies in connection with the mission had been carried on successfully. Sir Archibald Campbell, in moving the adoption of the report, said he was sure that they must all feel that those who, through the mysterious providence of God, were deprived of the senses of hearing and speech should be the special objects of their consideration and care. He knew that the Mission had been doing a very good work for many years past, and it was a good thing that there should be an institution of that kind where the deaf and dumb were so well cared for.

Bailie Hugh M'Culloch seconded the adoption of the report, which was unanimously approved.

HIGHLANDS AND ISLANDS MEDICAL SERVICE BOARD.—The second report of the Highlands and Islands Medical Service Board, covering its operations during the year 1915, states that on account of the decision to dispense with local administrative committees existing schemes have required revision, and new schemes have been prepared for the work which now falls directly to the Board. Its first consideration has been to bring an efficient medical service within the reach of persons of the crofter and cottar classes and their families, and others in like circumstances, at reasonable fees, the cost not being increased by distance from the residence of the medical practitioner. They suggest either low uniform fees or a system of annual payments, and that part of the funds at their disposal should be applied in meeting the considerable addition to the doctors' travelling expenses. It may be necessary to supplement the income of a doctor where it is inadequate, or to make inducements to medical men to settle in certain districts. Where practices overlap it is proposed to pay for the additional work and for travelling expenses. The allowances will be reconsidered each year. So far as can be judged from the suggestions which have been received, there is no pressing need for additional doctors, except in a few localities, if adequate travelling facilities are provided. A reasonably full service of well qualified nurses is to be provided, and the provision and improvement of houses for doctors is to be considered.

It is not intended that the provision of nurses should mean the relaxation of local efforts, on which this branch of the service has hitherto depended. General conditions are laid down under which district nursing associations will be eligible to participate in grants from the fund, and for grants towards capital expenditure and maintenance of hospitals and the provision of ambulance services.

A preliminary scheme indicates the general conditions under which grants will be made from the medical fund towards specialised services, including medical consultations, assistance at operations, and the provision of surgical appliances, dentistry, school clinics, and other approved forms of service, but the



opinions of medical officers of health and other officials are to be asked on this point.

For the present the scheme will apply to the families and dependants of insured persons, uninsured persons of the crofter and cottar classes and their families and dependants, and others in like circumstances to whom the payment of the ordinary fee would be an undue burden. The fees chargeable to such persons will not exceed 5s. for the first visit and 2s. 6d. for each subsequent visit in the same illness. In midwifery cases the maximum fee (including subsequent visits) will be £1. The first patient to benefit under the arrangement received for 6s. 6d. services which otherwise would have cost £2, 5s.

In the financial year ended 31st March, 1915, the expenses of the officers of the Board amounted to £1,441, 9s. 7d. At 31st December, 1915, the balance at the credit of the fund was £67,663, 17s. 9d., and there had been expended on medical service £6,718, 12s. 4d. and on nursing service £964, 9s., while grants had been made to Insurance Committees towards the travelling expenses of practitioners to the amount of £1,560. The cost of the scheme for 1916 is put at £20,109, 10s., and after the war at £20,637, 10s. per annum.

It is stated that when the report was prepared the parishes for which the Board had not been able for the moment to make arrangements were: Argyll—Coll, part of Kilcolmonell, part of Glassary, and Inveraray; Caithness—part of Latheron; Inverness—Ardersier; and Orkney—mainland parishes, Hoy and Graemsay, Rousay, and Egilshay.

THE CARE OF CHILDREN.—Under the auspices of the Workers' Educational Association on the social aspects of the war, a lecture on "The War and the Child Welfare Movement" was delivered in the Royal High School, Glasgow, on 5th June, by Mrs. Leslie MacKenzie, F.E.I.S. Taking as the datum line the infantile death-rate for Scotland, which, with large local variations, ranges from 90 per 1,000 births in the landward population to 117 per 1,000 births in the burghal population, the lecturer insisted that the care now extended to children under one year is equally necessary for all other children of the pre-school ages. From the latest available reports of the school medical inspectors, who annually examined

some 400,000 Scottish school children, it was easily inferred that much of their work arose from the present inadequate provision for the inspection and treatment of children before going to school. As a result of the social awakening due to the war, voluntary institutions and agencies had developed rapidly and had achieved a great deal. But the problem of the pre-school child far outran the resources of voluntary effort, and Parliament, in recognition of this, had conferred on local authorities new powers under the Notification of Births Acts and the Midwives (Scotland) Act. Already the maternity benefit clauses of the National Insurance Act had been operating with more or less success in a limited area of the field; but the new powers covered the whole period from before birth to the school age. In the memorandum recently issued by the Local Government Board general directions were given for the preparation of schemes of maternity service and infant welfare. The local authorities and their medical officers, in spite of the great handicap due to depletion of staff, were seriously tackling the preparation of schemes. The grant-in-aid sanctioned by the Treasury amounted to 50 per cent of approved outlays. This should enable the local authorities to produce effective schemes even in the present difficult circumstances. It was expected that a fully developed scheme would enable the Medical Officer of Health to provide each child with a certified health schedule for presentation on admission to school. Some special points arising from the new legislation were discussed.

A public meeting convened by the Countess of Mar and Kellie to arouse interest in the question of child welfare was held on 12th June in the hall of Townhead Institute, Alloa, and was notable for an address by Lord Balfour of Burleigh. After Dr. Leslie MacKenzie had explained the administrative and financial provisions of the Notification of Births Act, and Miss Haldane, of Cloan, had described the working of a child welfare centre, Lord Balfour of Burleigh said that in England and Wales (the figures in Scotland were not yet available) 95,608 children died under one year in 1915, and during the same period and taking the whole population of England and Wales, the number of deaths of men and women between the ages of 40 and 60 was less by 600. That was a very striking fact, and would lead them to the conclusion that for one reason or



another there was an appalling wastage of infant life, which was a serious loss to the community at large. Medical science told them that to a large extent these infantile deaths were preventable. He would not say they were due to neglect and carelessness on the part of mothers, but he believed they were largely due to ignorance and carelessness. The causes in some cases were causes of heredity, in other cases poverty, deficient housing, in some cases mothers going out to work too soon after confinement, and in others again the results of uncertain and unsettled habits on the part of mothers. Those causes were largely preventable, and the object they had in view in the movement was to ascertain the facts in particular districts and apply the remedy. There were no doubt many qualified ladies who had sufficient leisure time to devote an hour or two a day when necessary to visit homes and instruct expectant mothers and nursing mothers what should be done, and under the guidance and direction of the medical officer, who would be at the head of the movement in the county, nothing but the most beneficial results must follow.

Lord Mar considered it was incumbent on all communities to take up the question of child welfare seriously and energetically, and endeavour by all the means at their disposal to arrest the tremendous loss of infant life which was going on all over the country.

THE WAR AND THE MEDICAL PROFESSION.—At the opening meeting of the summer session of the General Medical Council, the President, Principal Sir Donald MacAlister, made a statement regarding the manner in which the claims of the war are being met by the medical profession and by medical students. He said that the necessary demands of the medical departments of the military service for qualified medical officers continued to put a severe strain on the resources of the profession. The central and local committees which had now been established in the three kingdoms, and recognised for recruiting purposes by the military authorities, were actively engaged in endeavouring to meet these demands, and at the same time to leave a fair provision for the medical needs of the civil population. The task was not easy. It called for much careful consideration of individual persons, places, and circumstances. This could

hardly be given under any general scheme of conscription, or by any but professional committees in touch with practitioners throughout the country. The value of the work already done by these committees was acknowledged by the War Office and the Admiralty. The greater support and confidence extended to them by the profession the better they would be able to carry through their important operations for the good of all. It had been expected that in 1915, the first complete year since the war began, the number of practitioners added to the register and available for military or civil work would show a perceptible decrease. The expectation would probably have been realised but for the decision to recall from the combatant ranks medical students of the senior years, and but for the establishment of reciprocity with the Dominions and with Belgium. In the result it came out that the number of registrations in 1915 was 1,526, or 364 in excess of the average (1,172) for the preceding five years.

The question of maintaining in this and in future years a supply of newly qualified practitioners sufficient for the needs of the country continued to engage the attention of the military authorities and of the Council. The calling-up of junior medical students under the successive systems of recruiting had undoubtedly given rise to some anxiety. Inquiries were accordingly made at the instance of Lord Derby, as Director-General of Recruiting, in order to ascertain the facts of the situation. From returns obtained by the Council last January it appeared that the number of students who during 1915 began medical study in the various professional schools and teaching institutions was 1,935. The number of first-year women students was 456. The number of second-year students was 1,020. The average annual entry of first-year students registered during the preceding five years was 1,441. In 1915 there were nearly 500 first-year medical students in excess of the average annual number registered in the previous five years. At the beginning of the present year the number of first-year students in actual attendance on instruction at medical schools (apart from teaching institutions) was ascertained to be 1,626. The expected depletion of students, as compared with normal years, had thus been more than compensated by new entries, and if things remained as they were the position four years hence



would not be unsatisfactory. It was thought advisable, however, to recommend that exemption from military service, already conceded to fourth-year and fifth-year students, should be extended to third-year students who showed their proficiency in the earlier subjects of the curriculum by passing a third-year professional examination in March or April at the end of the winter session. An order to this effect was accordingly issued from the War Office. Lord Derby then asked the Executive Committee of the Council to appoint a small committee, including two representatives nominated respectively by the President of the Board of Education and the Secretary for Scotland, for the purpose of watching the general situation as regarded Great Britain, and reporting upon it to him as Director-General of Recruiting.

In view of the fact that under the attestation and the compulsory systems many of the medical students of 1915 would by April have been called from their studies, Lord Derby further requested that returns should be obtained of the numbers belonging to each of the five years who were in actual attendance on professional courses of instruction at the beginning of the present summer session. The replies to his (Sir D. MacAlister's) inquiries on this head were returnable on 18th May. They were not yet complete, and they had not been fully analysed, but so far as they did go they gave the following results:—

Students still pursuing their professional studies in May, 1916:—First year, 1,800; second year, 950; third year and fourth year, 1,750; final year, 950.

The expected depletion was most marked in the third year and fourth year group. Owing to the order which he had mentioned, many third year students were reckoned with fourth year students for recruiting purposes, and the group could not readily be divided. It was proposed to call Lord Derby's attention to this group, as its present depleted condition indicated that a shortage of newly qualified practitioners might be expected by the end of the year 1918.

THE DRINK PROBLEM OF TO-DAY.—Under the title of *The Drink Problem of To-day in its Medico-Sociological Aspects* there has recently been published a revised and enlarged edition

of *The Drink Problem*, a work which first appeared in 1907. It is edited by Dr. T. N. Kelynack, as was the former work, and its eminent contributors, all men except for Dr. Mary Scharlieb, who writes upon alcoholism in relation to women and children, discuss the pathology and psychology of alcoholism, its relation to crime, its effects upon work, and so forth, each from the point of view of an expert on the subject of which he writes. The book is intended as much for the layman as for the medical profession, and is written, its editor assures us, in a strictly scientific spirit, while "all purely polemical points have been as far as possible excluded or kept within strict limits." It ought, therefore, to be a model of fairness, and it should form a valuable contribution to the study of alcoholism. Of many of the contributions it may be said that they in a great measure satisfy these desiderata, but they are all, with the exception of Dr. Claye Shawe's study of the psychology of alcoholism, written from the standpoint of the prohibitionist. The note is therefore apt to be forced, and the impression which it is sought to convey to the mind of the layman by this assemblage of authorities is that alcohol is in all circumstances an evil thing. Many people hold that opinion, but it is controversial; and if the intelligent layman is to be convinced it must be by something like unanimity of medical opinion, and by arguments both scientific and guiltless of suppressing facts that seem to favour the opposite side. Even the contributors to this book are unanimous with some difficulty; Dr. Claye Shawe, for example, in his otherwise very temperate and able paper, says of Dr. Harry Campbell's theory of the origin of alcoholic craving that it is "guess-work." Suppression is a favourite weapon of the controversialist, but it is a little strange to find Sir Alfred Pearce Gould writing an article strongly condemnatory of the use of alcohol in war, either for soldier or civilian, without any reference to the general assent of the R.A.M.C. to the use of the rum ration.

If any section of the book might be expected to be scientific it is that on the pathology of alcoholism, and Dr. Sims Woodhead's contribution may therefore call for a somewhat closer examination. He begins with the statement that the water flea is unable to exist in a solution of one part of alcohol in 4,000 of water. No doubt it is true, but the layman who



knows that a gillie can for years carry on a life of hard physical work and intelligent observation on a diet in which neat whisky plays a prominent part is not likely to be much impressed by the observation. He states that alcohol plays an important part in causing fatty degeneration of the heart muscle, that it renders systolic output incomplete and causes dilatation, that heart failure is often due to fatty degeneration, and that a patient suffering from alcoholic degeneration runs a greater risk of it in fevers or from overwork than does the man with a healthy heart. That is, he draws no distinction between alcohol and alcoholism; he threatens every user of alcohol with the degenerations that follow the drunkard or the soaker. He says, in fact, deliberately that calcification in the vessels occurs in patients who, though not necessarily drinkers, up to the later years of adult life "have taken what they are pleased to call 'moderate' doses of alcohol." "Polemical points have been as far as possible excluded"! The writer knows cases in point where the arteries in old age have been as soft as a child's. But Dr. Sims Woodhead insists upon alcohol as the chief cause of arterio-sclerosis; he makes no mention of the influence of heredity in its production, he ignores Ruffer's observation that it is common and often of early occurrence in abstaining Mohammedans, and he does not refer to any of the modern work on its connection with alterations in the secretions of the endocrine glands. He considers that the freedom from disease of armies in the present war, though the result of better treatment of wounds, &c., is chiefly due to the sobriety of their officers. He connects the rum ration with the frequency of trench kidney. But trench kidney is one of the somewhat new features of this as compared with former campaigns, and surely it is a commonplace that in this war our soldiers have drunk less and not more than they used to do in previous wars.

It is much to be deplored that in a book apparently of an authoritative nature, vouched for as scientific and free from polemical points, such laxity of statement should be permitted. It is a well-known feature of "temperance" advocacy that its advocates spoil a good case by overstating it, but more is rightly expected from its medical advocates than a biased presentation of one side only of the scientific evidence. The book has been brought out, it would appear from the preface

and from many references in the various contributions, under the urgency of the situation created by the present war, and with the intention of furnishing powerful arguments for prohibition; all the more reason that it should not give the enemies of true temperance, which was never more desirable than now, occasion to rejoice. The too prevalent habit among scientific men of considering anything good enough for a layman is a real misfortune; the layman with a good all-round education is very ready to detect fallacies even in a "scientific" argument. Indeed, on this question of prohibition the scientific evidence is equivocal; from the clinical standpoint many may claim that at least as much good has been done by the reasoned use of alcohol in emergency as harm by its habitual abuse. We question whether the victory for abstinence will not be more readily gained on the higher and at the same time surer ground of the moral issue, by an appeal to the spirit of sacrifice on behalf of the weaker brethren, a sacrifice for which the temper of the times would seem to show that the nation is almost ripe.

LITERARY INTELLIGENCE.—The Crown Prince of Serbia has given his photograph for reproduction in a book which will shortly appear, written by Mr. and Mrs. Berry, Mr. W. Lyon Blease, and other members of the party, entitled "The Story of a Red Cross Unit in Serbia," and has allowed the volume to be dedicated to him. The book, which is to be published by Messrs. J. & A. Churchill, deals with the recent history and the aims of the Serbs, as well as with the exciting travelling and other experiences of the Mission, the establishing of hospitals, sanitation, and the treatment of a severe epidemic of typhus. It tells of the Austrian invasion, and shows how the unit fell into the hands of the enemy. The volume is illustrated by photographs taken by various members of the party.

---



## REVIEWS.

*The Sex Complex.* By W. BLAIR BELL, B.S., M.D. London: Baillière, Tindall & Cox. 1916. (12s. 6d. net.)

THE monograph just published by Dr. Blair Bell on *The Sex Complex* is one which we have looked forward to and that we welcome.

The number of papers and works dealing with the internal secretory glands from the physiological and pathological aspects have been extensive of recent years, but in none of them is there better shown the results of a long period of careful experimental research, the ability to contrast and use the results of other workers, and to focus and correlate the functions of the respective glands to each other, than in the present work. Dr. Blair Bell's studies have been conducted over a number of years, and the papers which he has already published bearing on this subject, especially the "Arris and Gale Lectures of 1913," the paper "On the Relation of the Internal Secretions to the Female Characteristics and Functions in Health and Disease," and his studies "On the Calcium Metabolism in Relation to the Female Functions," have already made a reputation for his work which requires no further comment.

The present monograph is based on the subject matter of his previous communications, with, in addition, the application of them to the elucidation of the large amount of clinical material which he has accumulated, and in a volume of over 200 pages he has been successful in the task of presenting a difficult subject in a very attractive and pleasing book form. From beginning to end he has kept the purpose of the book in view, viz., that "femininity is dependent on all the internal secretions," and that "we must consider the ovaries as a part of a system to which most, if not all, the other endocrinous glands belong, and

in which these other organs in their relation to the reproductive functions figure with as great importance as the ovaries themselves." The first part of the work deals with the subject from the morphological and physiological aspects chiefly, and he embodies in it the results of his own experimental studies.

The functions of the ovaries and their relationship to the other glands, with the experimental results following on oophorectomy, are fully dealt with; and in a like manner in detail the functions of the thyroid, parathyroid, pituitary, and suprarenals, &c., are investigated, and the effects of insufficiency, excess, or disordered function are discussed.

The investigations in connection with the ovary and pituitary are especially worthy of high commendation. In a number of cases of experimental oophorectomy a complete investigation of the metabolism of the animals before and after the operation was undertaken, and as a result of the experiments he has demonstrated that the calcium excretion is diminished by one half, while the nitrogen, urea, and phosphorus excretion are much increased. He has also demonstrated in such cases, in rodents, a considerable increase of the functional activity of the thyroid with basophile character of the colloid, which he thinks should be taken as indicating a storage secretion formed to meet the altered conditions of metabolism.

In the case of the pituitary he has found that removal of the ovaries causes a certain increase in the secretory activity of the anterior lobe, but the nature of the changes is not the same as that found in pregnancy. His observations in connection with the gland have led him to the conclusion that the pituitary body must be regarded as "one organ," and not as a gland in which the functions of the anterior and posterior lobes can be separated; thus the secretion elaborated by the anterior lobe and pars intermedia he regards as pro-infundibulin, which after passing into the posterior lobe is modified and acquires the pressor qualities attributed to the posterior part of the gland.

His explanation of the variation in the staining character of the different types of cells is one well worth considering, and distinctly original.

"The eosinophile cells represent the normal actively secreting cells of the gland which ordinarily discharge their secretion into



the blood-vessels and lymphatics. If there be no great demand for the secretion the cells may enlarge and become basophile; they then gradually become darker and more swollen until finally they discharge basophile colloid among the neighbouring cells, which may form a vesicle-like wall around the secretion. After the discharge of colloid the basophile cells become small, shrunken, and faintly stained (chromophobe in character)." In his experiments on this gland he was unable to produce the condition of *dystrophia-adiposo-genitalis* by removal of large or small portions either of the anterior or posterior lobe, but was able to produce the condition in a greater or lesser degree by separating or clamping the stalk of the gland.

In the second part of the book the author deals with the subject from the pathological aspect, and he has followed a similar arrangement of his topics for discussion. The derangements of the functions of the genital organs and the conditions associated with the maintenance of these functions are first dealt with, and later the disturbances of the internal secretory glands and their influence on the genital functions and sexual characteristics, concluding with a brief description of the sexual and reproductive psychoses dependent on these derangements. In this part of the work such topics as deal more strictly with the mal-development and disturbed functions of the genital organs have received as full consideration as the scope of the book will permit, and occupy a somewhat larger space than that allotted to the internal secretory organs, and the author's clinical material has been drawn upon to supply the illustrative cases. We would make special reference to the cases of glandular partial hermaphroditism and of partial tubular hermaphroditism, which have been fully described by him.

In the first case the patient had an ovo-testis on the left side, with a small normal ovary on the right, and she showed a development of the secondary male characteristics. After hysterectomy the voice, figure, and skin were greatly altered toward the feminine type. In the second case the feminine secondary characteristics were present, and when laparotomy was performed it showed the presence of testes within the abdomen.

The illustrations have been well selected and are well executed, and the monograph is one that we can highly recommend to the members of the profession.

*The City of Din: A Tirade against Noise.* By DAN M'KENZIE, M.D.Glasg., F.R.C.S.Ed. London: Adlard & Son. 1916. (3s. 6d. net.)

THIS city of Dr. M'Kenzie's is no metaphorical abode of evil spirits, not even a city of the present war made hideous by high explosive shell and Zeppelin bombs, but the city of the modern town-dweller in the piping times of peace. Its leading characteristic in his eyes is noise, and noise he defines as painful sound. Such sounds are not those of nature—he has a good word to say for the dog, the corn-crake, and even, with some qualification, for the nocturnal cat—but those of modern civilisation at its acme of development in the modern city. He draws a contrast between the civilisation of Thebes and that of to-day, a contrast of which he declares the most striking feature must have been the noiselessness of Thebes. In later times even Florence must have been quiet, for Dante has no “circle of the Inferno given over to the devils of racket.” The din of the streets, the roar of motor-buses, the fierce torture of the motor-horn, the rumble and scream of the tramcar—on these Dr. M'Kenzie empties the vials of his wrath. Of typically Scottish noises he selects the Sabbath pandemonium of the bells of jarring sects, and of Glasgow noises he gives pride of place to a recollection of *Alma Mater*—the “twopenny tinkle” of the University bell. Restaurant music of the Sousa type, Wagnerian vocalisation, the din of railway travel, the shriek of railway whistles and factory hooters—all these add to the incessant bombardment of the auditory centres that leads to cerebral exhaustion, and may seriously prejudice the general health. On the other hand, the effect of the constant repetition of a given noise in those whose occupation exposes them to loud sounds is nerve-deafness, that part of the organ of hearing being first destroyed which corresponds to the pitch of the predominant note. Dr. M'Kenzie indicates the measures which may be taken to avert these unhappy consequences, and pleads for a general recognition of the evil effects of noise, a recognition of which he already hails some faint foreshadowings. His book is written eloquently, vivaciously, and persuasively, and illuminated by a humour which will bring many a smile to the



lips of his readers. He specifies few cities by name, though London is evidently the centre of his argument. We can wish no evil to the zealous advocate of a cause with which we are so much in sympathy; but if he had recently lived in Glasgow he might have added that missing canto to the Inferno.

---

*The Inevitable Complement: The Care and After-Care of Consumptives.* By HAROLD VALLOW, M.D. London: John Bale, Sons & Danielsson, Limited. 1915. (1s. 6d. net.)

THE author points out that the promises of the Government with regard to the treatment of tuberculosis have not been carried out. Systematised after-care is necessary to lessen the number of relapses after sanatorium treatment even in very early cases. The crux of the whole question is, of course, the economic question of how a man who can earn a living wage at a trade which is, considering his health, unsuitable is to change to a more suitable occupation and earn the same wage. The answer, unfortunately, in most cases is that it simply cannot be done, and the unsuitable occupation is again resumed as being the lesser evil. In a useful chapter is given a list of suitable occupations, with notes. The book is written clearly, and will be found a useful guide to anyone interested in this vitally important problem.

---

*Diseases of the Throat, Nose, and Ear.* By WILLIAM H. KELSON, M.D., B.S., F.R.C.S. Eng. Oxford Medical Publications. London: Henry Frowde and Hodder & Stoughton. 1915. (8s. 6d. net.)

A MANUAL written for general practitioners and senior students, and to them it can be cordially recommended. It is full of practical hints, the result of careful clinical study and observation. The operations that the general practitioner can perform are fully described. Where there is an element of risk in operating, as in some intra-nasal conditions, the dangers are pointed out.

Some reference will be found to all affections of the throat, nose, and ear. The descriptions are concise, pithy, and thoroughly practical. On some matters, perhaps, more details might have been given. For instance, in discussing laryngeal diphtheria, the author advises, in doubtful cases, isolation of the patient and preparations for intubation or tracheotomy, steam inhalations and hot fomentations, &c. We should be inclined to suggest, in addition to that, a protective dose of diphtheria antitoxin.

In discussing the conditions causing reflected pain in the ear we find no reference to diseased molar teeth, which we think is the most frequent cause of pain referred to the ear. These, however, are subjects on which there may be differences of opinion, and, after all, are minor points in a splendid volume.

At page 236 we read, "The aural conduction of a tuning-fork." Should this not be the aerial conduction?

The manual is well got up, is printed on good paper, and the illustrations are a feature of the book.

---

*Encyclopædia Medica.* Second Edition. Under the General Editorship of J. W. BALLANTYNE, M.D., F.R.C.P.E. Volume III: Chloroform to Dyspnœa. Edinburgh and London: W. Green & Son. 1916. (20s. net.)

THE third volume of the new edition of the *Encyclopædia Medica* includes articles upon such important diseases as chlorosis, cholera, chorea; affections of the choroid, conjunctiva, and cornea; diseases of the colon; cretinism; the various forms of dermatitis; diabetes mellitus and insipidus; diphtheria; and dysentery, now of such moment in military practice. Among surgical articles are those on cicatrices, circumcision, colostomy, cystoscopy, deformities, and surgical affections of the diaphragm. Papers on coccygodynia and curettage will appeal to the obstetrician, while of general interest are the articles on climate and acclimatisation, diet and digestion, and metabolism. There is in this volume only one important new article, that on chloroform by the late Mr. D. C. A. M'Allum; but all the others have been carefully revised, for the most



part by their original authors, and in many instances they have been largely if not entirely rewritten. With each succeeding volume the general excellence and completeness of the *Encyclopædia* become more apparent. Its eminently practical nature will especially commend it to practitioners. The illustrations are throughout admirable, and the coloured plates of skin eruptions and other conditions are as perfect as any that the reviewer has seen.

---

*Diseases of the Arteries, including Angina Pectoris.* By Sir CLIFFORD ALLBUTT, K.C.B., M.D., F.R.C.P., F.R.S. London: Macmillan & Co., Limited. 1915. Two Volumes. (30s. net each.)

IN these two volumes, "the winter fruitage of an old tree," as their author expresses it in his characteristically modest and graceful preface, we have the results of the life-work of Sir Clifford Allbutt on the two subjects with which his name is pre-eminently associated. The first volume and the earlier part of the second—in all, some 580 pages—deal with arteriosclerosis, and the remainder of the book with angina pectoris. The papers which Sir Clifford Allbutt has here collected, as he expressly states, have all of them been published before, but they are here consecutively arranged, and in their present form they afford a fuller view of the processes of his thought and of the results he has attained than was possible at the times of their separate appearances. His views upon both subjects are, indeed, well known; he as much as anyone has contributed to the unravelling of the problems offered by arteriosclerosis and angina; and though none will venture to assert that the pathology of these conditions is completely settled, it is safe to prophesy that his unremitting labours will count for much in whatever final elucidation may in time be reached. To read his volumes is a liberal education; they are a mine of wealth for the pathologist and the clinician; they testify to unwearied toil, to clear and accurate thinking, and to philosophical judgment; and their style—easy, cultured, and urbane even as he disposes of antagonists—is a literal refreshment in these days of hurried writing and of platform facts. Would that all old trees bore such fruit!

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

EDITED BY ROY F. YOUNG, M.B., B.C.

### MEDICINE.

**Further Experimentation on Animals with a Monilia commonly found in Sprue.** By Bailey K. Ashford (*American Journal of Medical Sciences*, April, 1916).—The author makes the following observations on the results of his experimental work :—

1. The species of monilia recovered by him from nearly one hundred cases of sprue is apparently new, and is pathogenic for laboratory animals (guinea-pig, white rat, rabbit, monkey) by hypodermic inoculation.

2. The species, which he calls for the present monilia  $x$ , is ordinarily a low virulence organism.

3. When recovered from a patient with sprue and promptly injected into certain laboratory animals, it generally produces their death from a mycotic septicæmia.

4. When grown for a long time, and frequently transplanted, it seems partially or completely to lose its virulence.

5. This virulence may be recovered by passage through susceptible animals, and even reach such a point as to sicken or kill these animals by continued feeding.

6. Usually an animal may not be killed by feeding on monilia  $x$  until its virulence has been increased by passage.

7. In such animals the symptoms depend on the part of the intestinal tube most affected.

8. A certain number of animals exposed by feeding rapidly die of a monilia septicæmia believed by the author to be due to a sudden primary pneumonia and secondary septicæmia.

9. Other animals die more slowly from what seems to be a toxin developed in the intestinal canal by a localisation of these monilia.

10. Feeding experiments have produced stomatitis on two occasions, and severe and long-continued diarrhœa on several occasions.

11. Monilia septicæmia causes the necrotic areas in organs described macroscopically as "white spots." Such organs are highly congested, dark red, and friable.

12. Localised in the skin, typical blastomycotic ulcers are formed. If an



internal organ be attacked, large colonies of monilia are seen which look like emboli. The author has never seen pus produced by monilia.

13. In one guinea-pig with severe stomatitis sections of the affected zone showed monilia in the midst of the muscular bundles below the sub-epithelial connective tissue. This may explain the tendency for sprue to recur after an apparent dietetic cure.

14. In experimental animals in which mycotic septicæmia is induced by intra-peritoneal injection, the lungs are most grossly affected, and after them the kidneys.—ARCHD. W. HARRINGTON.

**Congenital and Acquired Enuresis from Spinal Lesion—**  
(a) **Myelodysplasia**, (b) **Stretching of the Cauda Equina**. By William G. Spiller, M.D. (*American Journal of the Medical Sciences*, April, 1916).—Under the name of myelodysplasia, Fuchs, in 1909, described anomalies of development and enuresis nocturna, associated often with spina bifida occulta, and depending on imperfect development of the lower part of the cord. The important features of this condition are :—

1. Weakness of the sphincters, and especially enuresis nocturna, persisting after puberty.

2. Syndactylism between the second and third toes ; more rarely between the second, third, and fourth toes ; still more rarely between the other toes ; usually bilateral.

3. Disturbances of sensation, chiefly of temperature sensation, not strictly radicular in type, especially in the feet, and more frequently only in the toes.

4. Defect of the sacral canal recognised by the Roentgen rays.

5. Anomalies of cutaneous and tendon reflexes in the abdomen and lower limbs.

6. Defects in the feet in many cases (pes planus, varus, valgus), sometimes with peroneus weakness ; also, trophic and vasomotor disturbances in the toes.

Other anomalies to be looked for are hypertrichosis of the sacral region, lipoma in the coccygeal region, asymmetry of the rima ani, forca coccygea or fistula-like depression of the sacro-coccygeal region.

Saenger, since the report made by Fuchs, has examined every case of enuresis nocturna by x-rays, but has found only one in which myelodysplasia existed. Three cases recently reported by Bonorino-Udaondo and Castex all showed nocturnal enuresis, skeletal malformations, infantilism, ogival palate, cephalo-facial hypertrichosis, syndactylism, and sensory disturbances in the big toes. It is important to remember that the enuresis of older children and adults, not necessarily merely nocturnal, may be a sign of spina bifida occulta, and may exist with but few signs of this defect. If such a defect be discovered by x-rays, it should warrant the physician in assuming that much exercise of the lower limbs might be followed by paralysis in the peroneal nerve supply.

Spiller describes three cases in this paper. The first was a case of pronounced spina bifida, aged 18, with enuresis and other symptoms increased by violent exercise. The second was a boy of 14 years who had spina bifida occulta, with enuresis and other symptoms developing after moderate exercise. The third case illustrates how disturbance of micturition may be acquired by stretching the cauda equina in bending the trunk far forward on the lower limbs. In such a position the lower roots are severely stretched. The patient was injured by an elevator descending upon him while he was working in a stooping position.

Difficulty in retaining the urine and fæces began soon after the accident, and persisted one year. The condition is now much improved. There is some sexual disturbance, the Achilles jerks are lost, the right knee-jerk is impaired, and the left a little exaggerated. Sensation is normal.

—ARCHD. W. HARRINGTON.

## OBSTETRICS AND GYNÆCOLOGY.

**Viscera from a Fatal Case of Eclampsia.** By W. Gilliat (*Proc. Roy. Soc. Med.*, 6th May, 1915).—The patient was a young primigravida at the twenty-eighth week. On admission to hospital she had had twenty-eight fits, and had received chloroform and saline injections. The urine, which was scanty, solidified on boiling. The chloroform was stopped and morphia was administered without any improvement in the patient's condition. Two hours later she was still unconscious, the fits now numbered about forty, and there was no sign of labour; Cæsarean section was accordingly performed, and the uterine wound was allowed to bleed freely; two pints of saline solution were left in the abdomen. The patient never regained consciousness nor did she secrete urine, though diuretin was administered per rectum, and she died fifty hours later. At the autopsy, sixteen hours after death, the liver was found markedly affected; there were numerous small subcapsular hæmorrhages throughout, and a larger one on the under surface; there were similar hæmorrhages throughout the organ, and microscopic examination showed that almost as much of the liver substance was degenerate as remained normal. The changes in the cells varied from irregularity of shape to absolute necrosis and disappearance of the nuclei; the vessels were not thrombosed. Both kidneys were slightly enlarged and congested, and the epithelium of the convoluted tubules was found microscopically to be swollen. In the brain a large subarachnoid hæmorrhage was found over the whole left frontal lobe and a small one over the right pre-Rolandic convolution. There were extensive perforations on both walls of the stomach; these were of large size without thickening of the edges, and in some places the ulceration did not extend through all the coats. This is characteristic of *post-mortem* digestion, first described by John Hunter, but it is unusual to find so extensive a digestion of the anterior wall of the stomach, and Dr. Gilliat has been unable to find any such case recorded.—E. H. LAWRENCE OLIPHANT.

**Condition of the Larynx and Trachea in Still-born Infants and its Bearing on Artificial Respiration.** By E. A. Barton (*Proc. Roy. Soc. Med.*, 1st July, 1915).—Examinations of the bodies of still-born children show that, in the majority of cases, the glottis is closed, and for about one-third of an inch below it the trachea is funnel-shaped, narrowing downwards till a point is reached where the points of the cartilaginous rings are bent forward so as to close the lumen. The structure is such that with the folding in of the muscular wall any muscular contraction tends to open the trachea. In the cases where this flattening of the lumen of the trachea does not obtain, it is probable that the infant has made an attempt at inspiration. If this description be accurate it is obvious that artificial respiration as usually carried out is useless. Intubation entails a very real risk of lacerating the cords, and Dr. Barton has



seen no ill results follow from mouth to mouth insufflation—holding the infant's nose. Certainly some air is blown into the stomach and possibly into the Eustachian tubes, but it seems to cause no harm. Dr. E. Holland thought the difficulty lay in the absence of proper blood circulation in the lungs, and that air could usually be drawn in by artificial respiration.—E. H. L. O.

**Metacentric Height of the Foetus in Utero.** By Dr. Griffith (*Proc. Roy. Soc. Med.*, 1st July, 1915).—In his presidential address Dr. Griffith discusses this question, which should be found interesting by all who are interested in sailing; and who in Glasgow is not? He describes his methods, which briefly are to suspend the foetus on a swinging tray, and by the lateral displacement of the tray to find the centre of gravity; then to make a homogeneous wax model of the foetus (to represent the homogeneous liquor amnii displaced *in utero*), and by similarly faking its centre of gravity and by measuring the distance between them, so to measure the metacentric height. The paper scarcely lend itself to abstraction and is published under the title "An investigation of the causes which determine the lie of the foetus *in utero*."—E. H. L. O.

**Uterine Fibromyoma Free in an Abscess.** By J. D. Malcolm (*Proc. of the Roy. Soc. of Med.*, July, 1915).—Dr. Malcolm showed a uterus and tumour removed from a woman, aged 40, who had been in bed for six weeks suffering from influenza, and for two days had suffered severe pelvic pain. A few days later the abdomen was opened, and the sigmoid flexure was found firmly adherent over the pelvic viscera, leaving a small part of the anterior surface of the enlarged uterus exposed. A cannula was passed into the pelvic mass per vaginam, but no pus was found. The bowel was then separated, and a large quantity of pus escaped in which the tumour was found quite unattached. The uterus was removed, but the ovaries and tubes were not implicated and were left. The vermiform appendix was involved in adhesions and was removed, and as the sigmoid was much inflamed a Paul's tube was fixed in the cæcum to give the lower bowel a rest. There was looseness of the bowels and frequent defæcation later, so Mr. Malcolm thinks this was a wise precaution. The fistula was closed after eighteen days, and the patient made a satisfactory recovery. There was a ragged gap on the posterior surface of the uterus. The fibroid was probably infected by some pus-producing organism, possibly that which caused the influenza, or conversely the pus-producing bacillus caused the symptoms attributed to influenza.

Dr. Hedley had recently operated on a patient where a fibroid had a pedicle so thin and so friable from torsion that the pedicle broke through when the fibroid was drawn up. The fibroid was adherent to all the parts around. Such a tumour might easily become infected from the bowel, and give rise to an abscess.—E. H. L. O.

**Auto-transfusion of Blood.** (*München. med. Wochenschr.*, 1915, lxii, 1597, quoted in *Surgery, Gynecology, and Obstetrics*, April, 1916.)—In women who have suffered severely from hæmorrhage caused by rupture of the uterus or extra-uterine pregnancy, Lichtenstein has adopted the method suggested by Thies of reinjecting the effused blood. The risk of causing embolism is obviated by switching it to defibrinate it. In fresh hæmorrhages from ruptured tubal

pregnancy the blood is presumably sterile, so there is no danger of infection from the transfusion. This is not always true of rupture of the uterus; but in Lichtenstein's case the conditions were favourable, as the membranes were unruptured. The uterus had given way at the site of an old Cæsarean section scar, and the placenta was torn.

The blood is dipped out of the abdominal cavity into a vessel containing a little Ringer's solution. It is then beaten and strained into another vessel containing enough Ringer's solution to dilute it properly. The blood is kept in a water bath at body temperature till the abdominal operation is finished. The blood is then run into a vein in the arm in the ordinary way. Lichtenstein has recently devised an apparatus similar to that used for the injection of salvarsan, and finds it satisfactory.—E. H. L. O.

**Umbilical Hernia.** (*Surgery, Gynæcology, and Obstetrics*, December, 1915.)—Dr. Du Bose describes an operation for this condition. After describing the various foetal structures (which he believes in the adult support the umbilicus by their action as ligaments), he gives his technique, which consists essentially in making his incision transversely to expose the sac, which is treated in the usual way; the fascia is then brought together from side to side, making a longitudinal or vertical scar. Incisions are then made transversely through the fascia, and the distal edges are brought together. The skin edges are brought together by two figure-of-eight silkworm sutures passing through the superficial line of fascial sutures. He is satisfied with his results, which include one case previously operated on unsuccessfully.—E. H. L. O.

**Hernia between Abdominal Recti.** (*Surgery, Gynæcology, and Obstetrics*, December, 1915.)—Dr. Fairfield describes an operation for ventral hernia. It is somewhat similar to the operation described by Du Bose, but the incisions in the sheaths of the recti are made longitudinally. The edges of the rectal fascia are sutured in a longitudinal line, then the fascia on each side is split about a quarter of an inch from each side of the line of sutures. The proximal edges are next sutured together, and then the distal edges are brought together, giving a treble layer of fascia. Fairfield is careful to sew edge to edge, as he believes that when overlapped fascia does not unite to fascia unless there is traumatism of the surfaces.—E. H. L. O.

### *Books, Pamphlets, &c., Received.*

- Serums, Vaccines, and Toxins in Treatment and Diagnosis, by Wm. Cecil Bosanquet, M.A., M.D., and John W. H. Eyre, M.D. Illustrated. Third edition. London: Cassell & Co., Limited. 1916. (9s. net.)
- The Drink Problem of To-day in its Medico-Sociological Aspects, edited by T. N. Kelynack, M.D. London: Methuen & Co., Limited. (7s. 6d. net.)
- Encyclopædia Medica. Second edition. Under the General Editorship of J. W. Ballantyne, M.D., C.M., F.R.C.P.E. Vol. III: Chloroform to Dyspnœa. Edinburgh and London: W. Green & Son, Limited. 1916. (20s. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDED 17TH JUNE, 1916.**

	WEEK ENDING			
	May 27.	June 3.	June 10.	June 17.
Mean temperature, . . .	53·5°	53·3°	48·7°	51·1°
Mean range of temperature between highest and lowest,	12·5°	14·9°	5·7°	14·3°
Number of days on which rain fell, . . . . .	4	4	6	0
Amount of rainfall, . ins.	0·61	1·03	0·66	0·00
Deaths (corrected), . . .	310	325	270	288
Death-rates, . . . . .	14·8	15·5	12·9	13·8
Zymotic death-rates, . . .	1·8	1·6	0·8	1·2
Pulmonary death-rates, . .	3·7	3·6	2·9	3·4
DEATHS—				
Under 1 year, . . . . .	59	45	54	35
60 years and upwards, . .	77	92	59	75
DEATHS FROM—				
Small-pox, . . . . .	...	...	...	...
Measles, . . . . .	22	20	9	17
Scarlet fever, . . . . .	2	3	1	6
Diphtheria, . . . . .	6	4	2	2
Whooping-cough, . . . .	5	6	5	5
Enteric fever, . . . . .	...	1	1	...
Cerebro-spinal fever, . . .	1	3	1	3
Diarrhœa (under 2 years of age),	4	3	5	3
Bronchitis, pneumonia, and pleurisy, . . . . .	47	49	48	45
CASES REPORTED—				
Small-pox, . . . . .	...	...	...	...
Cerebro-spinal meningitis, .	1	6	4	6
Diphtheria and membranous croup, . . . . .	19	36	28	20
Erysipelas, . . . . .	15	22	15	14
Scarlet fever, . . . . .	57	86	95	83
Typhus fever, . . . . .	...	...	...	...
Enteric fever, . . . . .	8	2	2	2
Phthisis, . . . . .	88	59	42	43
Puerperal fever, . . . .	3	...	1	3
Measles,* . . . . .	455	532	388	376

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

---

No. II. AUGUST, 1916.

---

ORIGINAL ARTICLES.

---

REPORT OF A CASE OF HERNIA INTO THE  
PARA-DUODENAL FOSSA.

BY J. HOGARTH PRINGLE, F.R.C.S.ENG.,  
Surgeon, Glasgow Royal Infirmary.

OUT of much confusion regarding the terminology of internal or retroperitoneal herniæ comparative order has been arrived at, thanks to the excellent descriptive accounts given by Moynihan and Dobson in the second edition of *Retroperitoneal Hernia*, published in 1906.

What has generally been called Treitz hernia is now known to have been, in the majority of cases, a hernia into the "para-duodenal fossa," or "fossa of Landzert," a fossa formed by the "plica venosa," which is the fold of peritoneum raised by the inferior mesenteric vein. The opening into this fossa, which is situated on the left side of the spinal column, close to the junction of the duodenum with the jejunum, is directed downwards and to the right; the special feature regarding it being the fact that it has the inferior mesenteric vein lying in its anterior and superior borders.



Moynihan and Dobson give a list of 69 cases of this variety of hernia that had been published up to 1906. In the *British Journal of Surgery* (vol. iii, page 48), Rendle Short adds a further list of 11 cases recorded since that date.

Because of the comparative rarity of these cases, and partly because of the state of things found in the abdomen during the operation, and in consequence of the fact that the diagnosis made before the operation was entirely erroneous, it may be of interest to record the following notes:—

H. M'D., æt. 40 years, was admitted to the Glasgow Royal Infirmary on 29th June, 1914, on account of recurring attacks of pain in the abdomen associated with vomiting.

He stated that he had had good health up to June, 1913, except for occasional "attacks of bile," when he vomited green bilious material, though he never went off work at these times.

In June, 1913, one Sunday afternoon, he was suddenly seized with severe pain in the epigastric area, which passed through to the back and up to the left shoulder, and to a less extent into the right shoulder; a few minutes after the onset of pain he vomited greenish material again. He was so ill on this occasion that he had to remain in bed for fourteen days, the pain being severe at times, and coming on after food; constipation was a marked feature throughout this attack.

After this illness he remained well until January, 1914, when he had another, and much more severe, attack of pain which started immediately after he had taken some food; it was very severe and he had a feeling of great distension of the upper abdomen; he did not vomit until about one and a half hours after the onset of the pain. The vomited material was again bilious in character. He remained off work fourteen days again, and was again under medical treatment. After this he continued well until eight weeks before admission, when he had a third attack of severe pain which began after taking food, and was again followed by vomiting; since then he has had great discomfort from a feeling of epigastric distension and often pain as well, both being brought on by the ingestion of food. He had been off work most of these eight weeks, and had only been able to take the lightest food all the time. He said he had lost weight considerably during this period.

He was much emaciated when admitted, his weight being 7 st., 6½ lb. Complexion sallow. Tongue moist and furred. Teeth in a bad state.

The abdomen was rather full in the upper part, and succussion sounds were easily elicited. In the left lower part of the epigastric region a tumour was palpable which seemed to be slightly nodulated, and was only very slightly mobile. The liver extended 1½ inch below the costal margin. Rectal examination was normal. A benzydene reaction was obtained with the motions, which were once or twice dark in colour.

It was found after a test meal that the gastric contents did not contain any free HCl.

He had some discomfort though no actual pain after food while in the ward before his operation, even though he was on the lightest food.

The tumour was always palpable in about the same situation, but he never could relax himself for a completely satisfactory examination of the abdomen.

As far as could be elicited he had never vomited any blood, but his emaciated appearance suggested the idea of the tumour being malignant, and the absence of free HCl from the gastric contents led one to think it might be in the stomach.

On 9th July the abdomen was opened in the middle line; but before this was done, and while he was relaxed by the anæsthetic, the abdomen was carefully palpated. The tumour, already noted, was easily felt in the lower left part of the epigastric area, while below it, at about the level of the umbilicus though more to the left, a second tumour was felt, more rounded and lobulated than the former and slightly mobile.

When the peritoneum was opened a somewhat remarkable condition presented. The stomach was apparently normal though rather pushed forwards; immediately below its inferior border a large ovoid swelling presented, but neither colon nor omentum nor small bowel was at first visible.

The transverse colon was found lying in the sulcus between the abdominal wall and the periphery of the swelling, which was about equal in size to an average Spanish melon. The gastro-colic ligament had split longitudinally over the prominence of the swelling, and through the rent the thickened,



opaque white peritoneum, forming the sac of an intra-abdominal hernia, was recognised. Palpation of the stomach showed that there was no tumour in connection with its walls.

While the lower tumour, first discovered to-day, was found to be in the hernial sac, the upper one lay behind the stomach; but whether inside or outside the sac it was impossible to determine at this stage of the operation owing to the adhesions that were everywhere present.

The first idea entertained regarding the hernia was that it might be a "duodenal" hernia, although it was placed almost entirely in the middle line, and did not extend more to the right than to the left side; but no ring could be found.

In the right iliac fossa the right hand layer of the pelvic meso-colon was found closely adherent to the cæcum and to a wide area on the inferior surface of the transverse meso-colon, the transverse colon itself being adherent in front of them. When these adhesions were cut down the appendix was found embedded amongst them and it was removed.

As the exact situation of the ring was still not evident the peritoneum forming the hernial sac was opened and the small bowel exposed. Its mesentery contained numerous large tuberculous glands, and the lower of the two tumours, felt before commencing the operation, was now found to be composed of a very large mass of tuberculous glands placed in the highest part of the root of the mesentery.

There were numerous membranous adhesions between various loops of the small intestine, as well as some very close and firm fibrous ones between some coils of bowel and the mass of glands; all were cut down, but during the separation of these latter adhesions the bowel got torn at two places, and the openings were at once sutured.

When all the adhesions inside the sac were free and the small bowel could be traced in its entire length, it was found that the "ring" of the sac was in intimate contact with the cæcum in the right iliac fossa, and that the ileum entered the cæcum immediately after emerging from the ring, the margin of which was closely adherent all around its very terminal segment; in the anterior boundary of the ring there was a large vein, the inferior mesenteric as it proved to be.

By degrees it became possible completely to separate the

adhesions between the ring, which really pointed downwards and rather backwards, and the ileum without injury either to the vein or the bowel, and then to reduce the whole of the small bowel except the quite proximal 6 or 8 inches of the jejunum which were intimately adherent to the glandular tumour already mentioned, which was situated to the right side of the duodeno-jejunal junction, and which was too large to bring through the ring. Part of the mass, and along with it the bowel adherent to it, was in the end, however, reduced by the aid of an instrument which was made for me by Messrs. Baird Brothers, Glasgow, many years ago, originally for the purpose of dealing with old-standing dislocations by the open method. It is really a steel "shoe-horn," and I have found it extremely useful for levering and guiding the articular ends of bones, especially the head of the humerus, into position, as well as for many other purposes. It acted most satisfactorily on this occasion in reducing the glands by preventing the margin of the mouth of the sac, which owing to the presence of the inferior mesenteric vein was inextensible, from catching in the grooves and irregularities of the tumour.

However, one portion of the tumour about the size of an ordinary tangerine orange was too large to be delivered through the ring even with the shoe-horn, and had to be left inside the sac with the bowel adherent to it. During the reduction of the bowel the ring gradually retracted from the iliac fossa upwards and towards the left side, in consequence of the drag made upon the left-hand leaf of the mesentery during the process of reducing the bowel, for it is at the expense of this part of the peritoneum that the sac of a hernia of this type enlarges; so that when the reduction had taken place as far as it could go, the ring was placed immediately in the middle line and over the lumbar vertebræ.

In view of the fact that the highest 2 or 3 inches of the jejunum were closely adherent to that part of the glandular tumour which could not be reduced, it appeared probable that a recurrence of the hernia might be expected to take place unless some form of radical cure could be effected, but as bowel had to be left passing through the mouth of the sac, the latter could not be obliterated. I therefore sutured the first 3 inches of the jejunum immediately to the right of the inferior mesenteric



vein, *i.e.*, just outside the ring, to the posterior surface of the stomach, and also placed a few sutures through the anterior wall of the sac and the retained jejunum on the left side of the vein.

The duodenum was greatly dilated and its walls hypertrophied owing to the obstruction caused by the glandular tumour, so an anterior gastro-enterostomy, with an entero-anastomosis between the afferent and efferent loops of bowel, was made; the openings in the sac and in the gastro-colic ligament were sutured up, and the abdomen closed.

The patient made an uneventful recovery. He vomited only on one occasion after the anæsthetic, and not again up to the time of leaving hospital. He was allowed out of bed on 8th August, and went to the convalescent home on 11th August. He returned on 26th August, 1914, feeling well; had not had any pain nor any vomiting. The bowels had been acting regularly; his weight was 8 st. 2 lb. on that occasion, and it was noted that the tumour was decidedly smaller than when he left hospital.

He was seen last on 14th November, 1915, when he looked well. He had entirely lost his cachectic appearance, and he said he felt well. He had never vomited since he left hospital, and had never had any pain after food. The glandular tumour could not be recognised by palpation. His weight at this date was 9 st. 9 lb.

In this case the hernia presented between the stomach and the transverse colon, and the great curvature of the stomach was just a little pushed forward by the bulging of the hernia at the upper part. The lowest limit of the interior of the hernial sac was placed over the sacral promontory, it reached up to the pancreas, and laterally it extended out over each kidney.

The second of the two tumours which had been felt through the abdominal wall before commencing the operation was the pancreas, and I believe it was this organ, and not the glands, which were entirely surrounded and buried by the coils of small bowel in the sac, that had been palpated at the various examinations of the patient in the ward previous to the operation.

The fact that as much as, at least, 6 inches of the highest

jejunum was intimately adherent to the glands made it impossible to establish a satisfactory posterior gastro-enterostomy, which otherwise would have constituted a perfect "radical cure" of the hernia. I was therefore obliged to make an anterior gastro-enterostomy, for the glands and the adhesions of the bowel to them were obviously producing a definite duodenal obstruction. In my experience an anterior gastro-enterostomy, if an entero-anastomosis be super-added, gives results that are quite equal to the posterior operation. The chief disadvantage seems to be the extra time required for carrying out the entero-anastomosis.

I believe the suturing of the jejunum to the posterior wall of the stomach in this case constituted an effective preventive against the possible reformation of the hernia; and I suggest that this method might be employed in the future in cases where it is not easy to bring about a satisfactory obliteration of the sac or its orifice. It would be more certain, and would do no harm, if a complete posterior gastro-enterostomy were made.

In the case now recorded the points of interest are the very great stretching of the sac, and the resulting displacement of its orifice (the "ring") from its normal situation on the left side of the lumbar vertebra down to the right iliac fossa; the dense adhesions between the ring and the termination of the ileum emerging from it; and the irreducible tumour which had to be left inside the sac.

The presence of the tuberculous glands is of importance; no doubt the tuberculous process was responsible for the adhesions that existed everywhere throughout the peritoneal sac, but I believe that it was responsible also for the formation of the hernia itself.

From the descriptions one reads of internal herniæ one might be led to consider that increase in the bulk of the hernia is the result of a continued increase in the intra-abdominal tension. While the first engaging of a loop of bowel in one of these pouches is possibly the result of tension, the increase in size of the hernia, *i.e.*, the access of more bowel into the interior of the sac is, I believe, the result of a tractive power exerted by that portion of the bowel already herniated upon that part of the bowel placed immediately distal to it (*i.e.*, immediately outside the orifice of the sac). The bowel in the sac, as the result of



peristalsis from above, becomes distended, and, in consequence of the peristaltic action of its own musculature, ought in turn to force its contents onwards and so empty its lumen; but if it should become considerably distended—as may readily occur from slight obstruction at the orifice of the sac—in place of its own contents being driven forwards the alternative is that a portion of the bowel just distal to it, and therefore outside the ring, will be dragged into the interior of the sac, with the result that the hernial tumour becomes larger by the amount of bowel dragged in.

Once this process gets started it may continue until symptoms of strangulation are brought about, as often happens in external herniæ; for in these herniæ strangulation is at times caused by this very action in consequence of the facts that the ring is fixed and immobile, and that the capacity of the sac is limited, but where the ring can shift its position and the sac can enlarge sufficiently, there is no reason why it should cease until the whole of the mobile small bowel has entered the sac. The tuberculous glands, and the adhesions between the loops of bowel that existed in this patient, would offer the necessary obstruction to the passage of the contents of the bowel through the ring, and so induce the enlargement of the hernia by backward drag on the bowel until there was no more left that could be herniated.

---

## DISEASE AND DOMESTICITY.

BY JAMES CRAIG, L.R.C.P. &amp; S.E., L.R.F.P.S.G.

No crisis in life brings out the best in human nature more markedly than serious illness in the household. The petty annoyances of daily life which were the source of much bickering and ill-feeling cease to have any influence on "the daily round, the common task," and a general hush of silence under the common sorrow pervades the whole home. Individual sacrifices are made one to another without a thought of personal comfort or personal right. Each vies with the other in trying to do his best to attain the common end. A husband will give up a good situation and the best of prospects, and hie him off to a new country with a better climate in order that a sick wife may recover or prolong her existence. A poor man will use all his savings of years to enable his wife to get the best surgical assistance in the most comfortable nursing home. All of us have these experiences almost every week, and some of us perhaps daily. So subject to disease is poor frail humanity that it is easily impressed on the right side whenever trouble comes to the domestic hearth.

Of course we shall be told by our pessimistic friends that there is a reverse side to this picture. This is no doubt true, but the occasions on which the reverse is shown are so few that one may dismiss them as exceptions to the rule. "That long disease, my life," as the poet Pope phrases it, is not the common experience of mankind, and it would be as unwise to accept his statement as true as it would be unwise to accept the Bolingbrokian philosophy enshrined in his poems as suitable to the aspirations of the generality of mankind. The disciplinary training of a household to disease, and the benefits accruing in the cases of Pope, Walter Scott, Byron, R. L. Stevenson, and Henley are simply incalculable. Even the wit of Heine and Swift was made more mordant and pointed by the misfortune of disease. Paradoxical as it may seem, even their homes were



made brighter and more attractive by its spectre. The very shape and form of the religion they adopted was adumbrated to them through the sufferings of disease. "Perfection through suffering" is not only a religious phrase, it is a natural law, and the presence of disease in the home seems to bring out all the best characteristics favourable to the realisation of such an ideal.

There is a more subtle form of disease present in many homes, and causing a good deal of heart-searching and heart-burning—a kind of no-man's-land of disease in which most of the symptoms are hidden or masked, and the most intimate friends are even not aware of there being anything amiss. People who are the subjects, the victims rather, of sudden outbursts of fury and temper are often suffering uncomplainingly of bowel and gastric disturbances or a form of uræmia. In too many instances we have a physical basis for many of the peculiarities of manner, of habits of life and thought, and even of moral conduct. Shakespeare in one of his plays says, "Canst thou not minister to a mind diseased?" He had not seen the effect of scammony, jalap, or castor oil on many diseased minds, the fountain and origin of which was the stomach or bowels. How quickly does a good strong purge or a steady continuation of mild laxative treatment influence beneficially many of these minor mental conditions. Children who quarrel and brawl with one another are often made sweet and amiable by regular doses of castor oil or some other laxative. Men with the rough manners of the taproom and the cowyard are often made sweetly pleasant and agreeable by the administration of a morning saline or some laxative mineral water.

I had a patient once who was capable of the most dastardly cruelty to his family and wife on account of dyspeptic troubles of which he was ultimately cured by regular morning doses of Epsom salts in hot water! Lethargic and dull children at school—those now classified in many cases as defectives—are often put on the straight road to success in life by a regular attention to bowels and diet. In too many of these cases the seat of the mischief is not always in the brain. The purity and flushing of the sewage system of our bodies have a great deal to do with most of the minor and recurrent forms of

mental derangement of an evanescent kind. Even the ordinary good living person with the Gargantuan appetite knows this, and practises it on every occasion. What an immense vogue laxative pills and potions have nowadays! Go through an ordinary industrial town any Saturday night, and see how they buy the bane and the antidote at the same time. With the joint and the vegetables and the tart they usually buy the patent purgative pills or syrups by which they are to rid themselves of the vile intruder! Bitter experiences have long taught them good sense and wisdom in these matters, and I think it a pity we do not emphasise it more at the bedside. Only by ceaseless iteration and reiteration can any improvement be brought about. I have listened to greybeards at public meetings who have spent their lives in the police and criminal service talking very wide of the mark when dealing with these poor hunted and hiding classes. They were all responsible for their actions and must have disciplinary punishment. Even Jane Cakebread, a confirmed dipsomaniac, after over 400 appearances for drunkenness in London had to have her disciplinary punishment. Even the continuous refrain of the beautiful sentence in the English book of common prayer had no effect on these world reformers—"Have mercy upon these to whom long years have taught and brought no wisdom!" They cannot understand a form of moral imbecility or irritability being due to physical or disease conditions. According to this school, the doctor who receives abuse from his patient, or who is spat at or injured by him, should immediately charge him to justice and have disciplinary punishment meted out to him. Even in Glasgow, according to police law, when a lunatic attacks his doctor or others the police will not interfere unless he is charged as a criminal. A lunatic once broke away from her moorings in the South of Scotland, or had been discharged well—I forget which—when she appeared at a married brother's house in Glasgow late one night, and put the household in a ferment. I told the police about her, but they would have nothing to do with her until she was criminally charged. After two hours' noisy demonstration in the house she jumped out of a two-storey window at 2 A.M., and ultimately died in the hospital from the injuries she received. This woman's death could have been avoided if the law would interpret these cases



in a commonsense way. The ideal of all law should not only be the restraint of the criminal, but the restraint of the potentiality for all crime. No fixed and determinate line can be made between the police and the doctor here, but if "good be the final goal of ill," surely every individual should contribute to its realisation.

One wet and stormy morning at 3 A.M. I was summoned to a house where a young man had become very peculiar and excitable. He insisted on lying on the floor with half his clothes on, and would not go to bed. I tried persuasion and cajoling and every wile I could think upon, but all to no purpose. Finally I made him as comfortable as possible with rugs and pillows, and told his friends to let him lie there till the morning and watch him carefully. In about an hour I was summoned from bed again to the same patient, who was now a raving maniac attacking everybody. I had seen two constables on the street when I was going to the case, so I thought I would get their assistance. After struggling with him for some time, in the course of which I got my head cut, I got the aid of five neighbours to restrain him. I went down and told the constables the circumstances, but they said they could not interfere, and refused to accompany me to the house. I then went to the nearest district police office and lodged a complaint, but the lieutenant on duty told me that was the law on the subject, and that the police duty was *not* to interfere. I then had to ring up the parish medical officer and get him removed to the asylum with a restraint jacket and warders, and during the time which elapsed the five neighbours had to keep him under restraint, and lose their morning's work. Domestic happiness is not being improved by such laws and regulations. There is surely something wrong here which needs a remedy.

In drunkenness, again, we see the home paralysed and made miserable by the neglect of proper police remedies. To expect a drunkard to give his consent to internment for treatment is impossible. According to the law he must be first made a criminal before he can be forcibly put under restraint. In other words, you must do something actually evil and wrong before the law will exercise its restraining influence on the potency for evil. If drunkenness had been treated ruthlessly and severely from the start, it would never have assumed such

proportions as it has done. Instead of blaming the casual drunkard and punishing him severely, a fine of half-a-crown or an admonition is all that happens, and the drunkard goes on merrily without showing any works meet for repentance. The publican is too often made the scapegoat of this nuisance to society, and his business is hampered and restricted in every way possible to a bureaucracy, with not the slightest benefit to the drunkard. Some kind and pious rescue societies take home this drunken wretch to his abode of sordidness, where he escapes the police, and this enables the police returns to show a great slump in drunkenness. The arrests for drunkenness are decreasing annually according to returns, but the numbers of drunken people seen and heard of all men are certainly not decreasing. Our streets are a most pathetic sight, especially on a Saturday night. I have travelled almost over the world, and in no part have I seen such sights of drunkenness as I see in my own native city. I am ashamed to say it, but *magna est veritas et prevalebit*. There are crowds of young men who set the ideal of getting drunk as a *sine quâ non* of a Saturday night's orgie. They boast about it on the Sundays at the street corners, and tell their companions how "gallows" they were, how drunk they got, and what a wild time they had. When people have such ideals there is only one way of dealing with them, and that is to suppress them by force. If they found they were up against something hard and very resistant when they got drunk, I am afraid their Dutch courage would fail them, and they would ultimately give way to *force majeure*. If we supplant these ideals by something nobler and better than a mere negation—or a restriction of public-houses—we will most certainly get rid of the ideal drunkard, who ruins the domestic hearth and brings more trouble to the home than any other form of wickedness.

The forms of law and order are evidently quite helpless before this formidable evil. The chronic drunk who is the plague of domesticity cannot be dealt with at all by the law until he commits an offence on himself or others. This is a state of affairs which is most intolerable, and should be removed or improved at once. No healthy life can be lived in the immediate environment of a drunkard. His bad example is an eyesore to everyone, and must have a very bad effect on young



children. When they see him staggering along the street uttering incoherencies and making grimaces, they are puzzled whether to regard it as a comedy or a tragedy. The temperament of the person makes it either the one or the other. Some drunkards have more tendency towards folly than crime, hence they make their existence more a comedy than a tragedy. That it is too often a hereditary disease in some poor creatures it would be idle to deny. When it is such, the law should be so all-powerful as to interfere in domestic affairs *nolens volens*, and put the diseased drunkard under some form of institutional treatment of restraint where long-continued habits of total abstinence could be carried out. Even a teetotal Siberia would be a good method of treating all hereditary drunkards. A colony of such people could be established where stimulants of all kinds would be taboo, and this could be done without any hardship to anybody, and no interference to any great extent with the other liberties of the subject. The liberty of the subject has become a kind of fetish of the modern mind. People so often confound liberty with license that no golden rule can be established. Until we make it easy to do good and difficult to do wrong we shall have all these little disabilities cropping up to spoil, mar, and jar the harmonies of domesticity.

The one outstanding disease that I find most troubles the home is chronic kidney conditions, with alternating skin and mental phases. The itch of diabetes mellitus can be put up with—even the boils and superficial suppurations are on unseen places—but a kidney toxin giving rise to scars and sores on the arms and face and legs is one which renders the spirit irritable, the mind lugubrious, and the outlook on life and other human beings suspicious and even malicious. A skin affection which can be seen of all men is one which modifies mentality in the most extraordinary phases. We are all familiar with the poor neurasthenic who is the victim of chronic nephritis. These cases are only too common and familiar to all medical men. How simple and easily led they are! How they accept all sorts of advice from all sorts and conditions of men! How they fall a prey to the physical culturist who tells them they are not taking sufficient exercise! They must go in for cycling, golfing, and all sorts of manly

sports in order to reduce their increasing weight. When cerebral hæmorrhage comes on from one or other of these follies, we begin to realise that a life of activity was not the life for this man with his diseased arteries, dilated heart, and disturbed circulation. A great many of the sudden deaths we read about could have been avoided if advice had been asked of their medical men before entering so enthusiastically into the realm of sport and pastime. Every man over fifty years of age should get a medical opinion about his heart and kidneys before taking up any violent form of exercise. Even mild forms of exercise, such as bowling, skittles, or croquet are dangerous when long continued and fatigue is induced. Fatigue is the hour at which the bodily powers of resistance are at their lowest ebb, and when disease is most apt to make its appearance. Moreover, kidney disease, contrary to so much advertised and popular opinion, is not fraught with pain in the back or anywhere as a symptom, and is consequently suffered from by many people for years without notice. No bad symptoms could be made out unless by medical examination of the urine or blood-vessels, and that is why it is so important we should impress upon our patients the necessity of periodical examinations whether they feel well or ill. By so doing they may find something wrong which may be easily remedied, and which later on, if neglected, might lead to disaster.

Once I was called to a patient who complained to me about her eyesight and periodic headaches. In the course of conversation she admitted to me that she might have some domestic worries which might bring about neuralgic headaches. She was quite sure her husband was not the man he used to be to her; she had complained to her family about him, and they had ranged themselves on her side, so that a state of continual strife seemed to exist in this domestic circle. Her eye condition was one of albuminuric retinitis, and she suffered from periodic attacks of uræmia, with brain symptoms and delusions. Where the actual convulsions of uræmia do not take place from the toxæmia, one is sure to get some derangement of the intelligence centres. Here was a woman, married twenty-four years to her husband, and who had had a large family, developing the most wild and immoral delusions about him on account of a morbid kidney condition. This household



of domestic peace for over twenty years was ultimately broken up by the physical disease and mental attitude of the mother. The father is, and always has been, the most temperate and straightest of men, and yet he has to go through this moral Calvary on account of disease conditions over which he had no control. The question comes—How many more such households are to be found in the country? I am afraid there must be a great many domestic circles affected by this form of malady.

Minor evils are often far more widespread than those of a larger and more evident nature. It is a case of the stitch in time which saves nine. In specific disease, again, it is most common to see phenomena presenting themselves in this way. In the case of a specific husband with a family, the wife developed the disease through some of the children, and, later on, was for years the bedridden victim of locomotor ataxia. Some two years before her death the husband developed curious notions about his fellow-workmen and his masters. After a year of gross mental aberration, in which restraint had to be applied at times, he brought tragedy into the domestic circle by taking his own life.

I once attended a woman, 40 years of age, who had had a large family and never much illness of any kind. She complained of persistent headaches, which I treated with ordinary simple remedies, all to no purpose. I then tried anti-specific remedies of various kinds, but also to no purpose. One day, when I was examining the head over one temple, I felt a peculiar egg-shell crackling, and noticed a distinct swelling over the bone. Sarcoma at once flashed through my mind. Perhaps a gumma, I thought, but my experience with anti-specific remedies did not enhance that view. No good result had taken place by their administration. I got a consulting surgeon to see her, and he favoured the sarcoma view. To eliminate the specific view, we took the husband into our confidence and pointed out the risk of our brain operation if the growth was of a specific character and could be removed medically without operation. He was very indignant at our suggestion, and denied the possibility of any specific disease. The operation took place, and was quite successful; but we found the growth to be a gumma! Later on, this man developed

neurasthenic symptoms, which were cured or held in check by anti-specific remedies. After some years he developed suicidal tendencies and drank a bottle of poison one morning on a sudden impulse, and so gave us one more illustration of the close and intimate connection there is between disease and domesticity.

In conclusion, let us try and make some coherency from these necessarily crude and disjointed remarks fished up from the abode of memory after many years dormancy. It is quite evident the powers that be do not always take into consideration the bearing and tendency of the conduct of life when it has grave or minor disease processes as the essential origin of its activities. The actions of human nature on the domestic circle and the social organism, as a whole, are not always capable of being understood without taking into account the mental and physical health of the actors. No possible motive can be found for the curious actions of many people, not even self-interest could be brought in to explain many peculiarities. Only a diseased judgment could explain such happenings, and the measure of responsibility is thereby considerably diminished. At no period in the world's history have we had so many freaky and cranky opinions generated as in the present age. There are people who take a negative view of nearly every affirmative suggested. Lately, I advised a lady to take a country holiday instead of a coast one, but she objected that her husband would insist on the opposite. I told her to ask a coast holiday then. The mechanical thinker fell into the trap and she got her country holiday. We have garden cities and associations of all these peculiar people whose only bond of union is their antipathy to commonsense methods of conduct—what is wisely called conventional life—and all these back-water and stagnant methods are only emphasising and perpetuating differences which produce no result but irritation. The seeking after harsh tones and discords in life instead of harmonies and concords is the only ideal of such people, and with many of them it is a question of disease rather than of deliberately reasoned judgment. The pandering to all such nonsense is endowing the evil and making it lasting. These people should see a doctor and be thoroughly examined, and then treated



medically for whatever is wrong. To wait on pain or gross evidence of serious organic lesions in the body is a grave mistake, and attended, as we have tried to show, by disastrous consequences. All exciting games and sports entailing muscular exercises should be graduated to people by the advice of their medical attendant, and not foolishly rushed into on the advice of some modern Achilles, whose only asset is his muscular prowess. The necessity of a yearly overhaul by the medical attendant becomes increasingly evident as the years go on. No yacht sails well without a yearly overhaul, and one might also say the same thing of human beings in regard to their sailings on the ocean of life. Much of the domestic unrest we meet with would be non-existent if we seriously made up our mind to face the conflict of life cheerily, especially with disease in the home. How many of our patients are peevish, capricious, quick to anger, and irritable about trifles. It is my humble opinion that *the friends* of many of our patients suffer more from a case of sickness in the home than the patient does himself. He is most insensitive to what is passing around him, but super-sensitive to what is passing within him. To make matters worse, he is often coddled and petted to such a degree that he remains an autocratic tyrant all his life. This result is brought about by the atmosphere which surrounds him, and in which he is schooled. An atmosphere of "sweetness and light" must envelop the bed of the sick, as well as all the therapeutic armamentaria of the physician, and this is a part of the treatment the average medico has often little faith in. The author of the *Horæ Subsecivæ*—the well beloved physician, Dr. John Brown—perhaps magnified this side of the treatment too much. He, at least, was a past master in the art of treating human nature in the diseased state less like a scientific mechanism only needing adjustment. His patients were not merely mechanical clinical material, but people with a psychological flavour about them, whose little cosmos had to be studied separately. It has been well said that a good pathologist makes a very bad physician. From the clinical material he gathers, he learns in what a hopeless condition the patient's diseased organs are trying to perform their functions, and he concludes that no drugs or treatment can do them any good. He gives the worst prognosis, and is never an optimist and

hardly ever a meliorist. The physician with no profound knowledge of pathology, but a more extensive experience of human nature, is often led to apply remedies and methods of treatment which spell many successes to him. He is never pessimistic or despairing, always *débonnaire* in manner, cheerful in facial expression and diction, and helpful to the patient in buoying up his spirits to a speedy recovery. Even in the most serious organic diseases this attitude is more useful and helpful in disease and domesticity than the cold, calculating, critical prognosis of the purely scientific pathologist. Idealism and enthusiasm for such a cause as the betterment of disease conditions are more likely to be buttressed and supported by an imaginative mind of wide and varied culture than by a mind profoundly versed in the most ancient and modern theories of pathology. The very dead weight of such material is sufficient to drown one, and cannot be readily imparted to patients and friends in other language than that of a learned disquisition. To carry your patient and his friends with you, it is necessary to clothe your thoughts and imagery in simple language to suit the homely ways and tastes of the average patient and his friends. It is in this way, too, we will acquire more knowledge of our usefulness to poor human nature when we meet disease in the domain of domesticity.

---



SOME VARIETIES OF CONGENITAL HEART DISEASE  
—PATENT FORAMEN OVALE—PATENT INTER-  
VENTRICULAR SEPTUM—PULMONIC STENOSIS—  
PATENT DUCTUS ARTERIOSUS.

By LEONARD FINDLAY, M.D.,

Visiting Physician, Royal Hospital for Sick Children, Glasgow ;

AND

W. BLAIR M. MARTIN, M.D.,

Lecturer in Bacteriology, Glasgow University, and Pathologist, Royal Hospital  
for Sick Children, Glasgow.

(*From the Royal Hospital for Sick Children, Glasgow.*)

(*Continued from p. 13.*)

CASE III.—*Congenital stenosis of pulmonary tract with atresia of orifice—Septal defects and patent ductus arteriosus.*

J. R., male, æt. 3 months, came under observation on account of taking "peculiar turns."

Mother has pulmonary tuberculosis; father is alive and well. There have been five pregnancies, and with the exception of the patient all the children are alive and enjoying good health.

The child was born after an easy labour, but did not breathe for some time. At the age of two weeks the mother noticed that the child's body was of a bluish tint. Since then he had had a cough and been subject to "peculiar turns," in which the cyanosis became very marked and the breathing stopped.

On admission to hospital it was noted that the child was well developed—weight 11 lb. 11 oz.—but extremely cyanosed, especially in the face, hands, and feet. There was a frequent distressing cough, but with the exception of abundant wheezing and snoring râles nothing abnormal was detected in the lungs. There was no enlargement of the precordial dulness, and the heart's sounds were pure. Pulse numbered 140 to 150 per minute. The temperature was normal.

The child continued in the same state until the second day after admission, when, one hour after its afternoon feed, it vomited and became unconscious, with stridulous breathing and increase of the cyanosis. With the administration of stimulants and oxygen the attack passed off, but early next morning the child took another seizure of the same nature and died soon afterwards.

*Summary of lesions found post-mortem.*—Congenital stenosis of pulmonary tract, with atresia of orifice, incomplete inter-ventricular septum, patent ductus arteriosus and patent foramen ovale—Extensive pneumococcic broncho-pneumonia—Venous congestion of organs.

*Details of post-mortem examination.*—The body measures 24 inches, weighs 11 lb. 11 oz., and is normally developed.

The thymus is prominent, weighing  $\frac{1}{2}$  oz.

The pericardium is normal.

The heart weighs  $1\frac{1}{2}$  oz. and is globular in shape, the apex being formed by an abnormally large ( $1\frac{3}{8}$  inch long) thick-walled ( $\frac{7}{32}$  inch) right ventricle. The left ventricle is a relatively small chamber, the maximum thickness of its wall being  $\frac{9}{32}$  inch. The inter-ventricular septum is incomplete above, leaving an ovoid aperture which measures  $\frac{3}{8}$  inch transversely, and through which the 0·3 inch cone passes easily. The mitral and tricuspid valves are healthy and disposed normally to the septum ventriculi. The right auricle is also the larger, being more than twice the size of the conical left auricle, though the walls of both are of equal thickness. The foramen ovale is in the form of an oblique, tunnelled, and completely valved opening which admits the measuring cone to 0·1 inch in diameter. A large aortic trunk, at least 0·4 inch in diameter, takes origin from the base opposite the septum ventriculi in such a manner that it communicates with both right and left ventricles. It possesses three perfectly formed and orientated semi-lunar valves, the coronary arteries arising as normally from the anterior (right) and left posterior sinuses of Valsalva respectively. The great vessels leave the arch in the usual order. A minute thin-walled pulmonary trunk, which measures  $\frac{1}{2}$  inch in length to its division into right and left branches, and is little larger than a coronary artery,



arises from the fleshy outer wall of the ventricle alongside and to the left of the aorta. There is no infundibulum to the right ventricle, the site of the pulmonary orifice being represented within the ventricle by a small triradiate endocardial thickening in front of the base of the left posterior aortic cusp through which the finest of probes fails to pass. Traced from without, the pulmonary trunk, which only admits a probe of  $\frac{1}{16}$  inch in diameter, is found to be occluded just external to its junction with the outer wall of the heart where it forms a fibrous cord. *The condition is thus an atresia of the pulmonary orifice.* A patent ductus arteriosus of about the same calibre as the left branch of the pulmonary artery joins it at the bifurcation, and would permit of a modified pulmonary circulation. The pulmonary veins are small but open normally into the left auricle in pairs.

The pleural sacs are free of fluid and there is no pleurisy.

The right lung weighs 2 oz., the left  $1\frac{3}{4}$  oz. They are much congested posteriorly and show areas of broncho-pneumonic consolidation throughout. Microscopically there is an almost confluent lobular pneumonia of fibrino-necrotic type. The central necrosis is so pronounced that bronchioles cannot be recognised in the affected areas. Pneumococci are very abundantly present in these necrotic zones. (There was no evidence of tuberculosis anywhere.)

The diaphragm is normal, and the abdominal viscera are both normally situated and developed. There is a degree of venous congestion of the liver, spleen, and kidneys. The only other noteworthy feature is the prominence of the lymphoid tissue in the small intestine.

The head was not examined.

In this case the broncho-pneumonic lesion is not only extensive, but it is also of some duration. Its development would accentuate the respiratory difficulty which the grade of pulmonary stenosis here present entails, and would intensify the cyanosis. The absence of fever and indubitable physical signs is no very unusual experience in broncho-pneumonia.

The primary factor here in the cardiac condition is a defective development of the pulmonary tract, which, according to Keith's<sup>10</sup> view, is an arrest of development of the bulbus cordis,

and not the result of intra-uterine endocarditis. The septal defects are inevitable consequences of the pulmonary atresia, and also date the lesion as beginning within the first month of intra-uterine life.

The fact that the pulmonary orifice was completely occluded accounts for the absence of any murmur indicative of pulmonary stenosis. The ductus arteriosus, though patent, functionated merely as a simple branch of the aorta, and therefore the conditions for the production of fluid veins, such as would have occurred with normal arterial trunks, did not exist.

The absence of a murmur, such as occurred in Case I, due to patency of the foramen ovale (in spite of the presence here of the same pulmonary conditions which we ascribed as the determining factor in that case) is to be accounted for by the patency of the inter-ventricular septum allowing of an equalising of the pressures on the two sides of the heart.

That there was no "Bruit de Roger" can be explained by the fact of the aorta over-riding the septum ventriculi.

Aeration of the blood cannot have been other than defective in this case, as only a fractional portion of the blood can have passed through the lungs if the only route was by the previously described small ductus arteriosus and pulmonary arteries. Whether there was an accessory supply through the bronchial arteries is unfortunately undetermined, as the condition of these vessels was not investigated at the time of the *post-mortem*. In view, however, of the smallness of the pulmonary veins the existence of an important collateral circulation is unlikely. The defective pulmonary circulation adequately accounts for the severe degree of cyanosis and the asphyxial attacks, though these no doubt would be intensified by the developing broncho-pneumonia.

CASE IV.—*Congenital stenosis of pulmonary tract, with septal defects.*

M. M'M., female, æt. 2 months, came under observation on account of wasting.

Father and mother are alive and well. The mother has had thirteen pregnancies. The first child was still-born; the second pregnancy resulted in twins, who died at the ages of 3 and 5 months of wasting and measles respectively; the fourth child



died soon after birth; and the twelfth at 3 years of whooping-cough. All the others except the patient are well.

The child, which had never been breast-fed, did not thrive although she took her feeds (cow's milk and water) well, and suffered from neither vomiting or diarrhoea.

On admission it was noted that the child was much undersized—weight 3 lb. 13 oz.—was cyanosed, and presented great distension of the veins over the chest and abdomen. She suffered from a purulent conjunctivitis. The skin of the palms of the hands, soles of the feet, and extensor aspects of the legs was desquamating. There was no apparent rash, no evident snuffles, and no excoriation of the mucous membrane of the lips.

The pulse was small and could not be satisfactorily counted. The precordial dulness was slightly enlarged to the right, and all over the heart could be heard a blowing systolic murmur, with its seat of maximum intensity at the base. The second sound at both pulmonic and aortic areas was loud and sharp.

At the bases of both lungs some moist râles were audible.

Nothing abnormal was detected in the abdomen.

The Wassermann reaction was negative.

Examination of the blood ten days after admission gave the following result:—

Hæmoglobin, . . . . .	120 per cent.
Red blood corpuscles, . . . . .	5,900,000 per c.mm.
White „ . . . . .	17,000 „

and two weeks later the red blood corpuscles numbered 6,980,000 per c.mm.

During the first week of residence in hospital the child increased in weight by about 1 lb.; for the next four weeks the weight remained stationary; thereafter it steadily declined during the last two weeks to its original register.

While the child was under observation the cyanosis varied much in intensity, at times only being described as lividity and at other times as cyanosis. On occasions the murmur could not be heard for some days at a time, and that quite irrespective of the degree of cyanosis; and during the last week of life, although the heart was frequently auscultated, no bruit could be appreciated.

Frequently the child took what were described as "fits" characterised by rigidity of the limbs, unconsciousness, dyspnœa, and as a rule a deepening of the cyanotic tint, although on one occasion the cyanosis was replaced by pallor. At no time were twitchings observed. Death resulted during one of these attacks.

The temperature during the whole period of observation was normal.

*Summary of lesions found post-mortem.*—Congenital stenosis of pulmonary tract, with defect of inter-ventricular septum at pars membranacea, widely patent foramen ovale and duplication of vena cava superior—Partial atelectasis with emphysema and marked congestion of the lungs.

*Details of post-mortem examination.*—The body measures 17 inches long, weighs 3 lb. 13 oz., and is both under-developed and much emaciated.

The thymus is small.

The pericardium is normal.

The heart, which weighs scarcely  $\frac{3}{4}$  oz., is rather globular in shape. Though the left ventricle actually forms the apex and is the larger chamber of the two, the right ventricle is definitely hypertrophied, having a maximum wall thickness of  $\frac{6}{32}$  in. The left ventricle measures  $1\frac{1}{8}$  in. in length and  $\frac{7}{32}$  in. in thickness. Further, the right auricle is large, being fully four times the size of the unusually small left auricle. The arterial trunks are normally related to one another at their origin, but the aorta is much larger than the pulmonary artery, the latter and also the infundibulum of the right ventricle being poorly developed. The aortic orifice measures 0·3 in. and the pulmonic 0·05 in. in diameter. Each has three healthy semilunar cusps. The coronary arteries arise normally, but the right subclavian has an independent origin from the arch beside a right common carotid vessel. The pulmonary trunk measures  $\frac{1}{2}$  in. to its division into right and left branches, the left receiving a thin ductus arteriosus which is  $\frac{3}{8}$  in. long and is occluded at the pulmonary end, though a  $\frac{1}{16}$  in. probe can be passed from the aortic side more than half-way. The septum ventriculi is incomplete in the region of the pars membranacea, leaving a transversely oval aperture  $\frac{6}{32}$  in. by  $\frac{3}{32}$  in., which scarcely



admits the 0·2 in. cone. The aorta takes origin entirely from the left ventricle. The mitral and tricuspid valve segments are healthy, and the orifices measure 0·25 in. and 0·35 in. in diameter respectively. The foramen ovale is widely patent, cone diameter 0·35 in., its valve being quite insufficient to close it in front. The Eustachian valve, also, is poorly developed. The right auricle receives an inferior and a superior (right) vena cava in the usual fashion, and also, through a much enlarged coronary sinus, a left superior vena cava, *i.e.*, the left duct of Cuvier and the corresponding horn of the sinus venosus, instead of remaining hypoplastic as they usually do, have in this case continued to develop. The pulmonary veins are small and enter the left auricle normally.

The pleural sacs are normal.

The lungs weigh 1 oz. each, and show much lividity of the dependent portions. Microscopically there is a degree of true atelectasis with slight compensatory emphysema, the non-expanded alveoli being rather irregularly disposed throughout, and the bronchioles being free of catarrh. There is a notable congestion of the pulmonary vessels, and at places there is even hæmorrhage into alveoli and bronchioles—apparently asphyxial.

The diaphragm, peritoneum, and abdominal viscera are normal in appearance. The weight of the liver is  $3\frac{3}{4}$  oz. and of kidney  $\frac{1}{4}$  oz., while the small spleen measures  $1\frac{1}{4}$  inch by  $\frac{3}{4}$  inch.

This case exemplifies probably the commonest type of congenital heart disease, *i.e.*, the combination of “pulmonic stenosis” with patency of the inter-ventricular and inter-auricular septa. The lesion is essentially similar to that in the preceding case (III), but lesser in grade, and there are notable differences in the result. The pulmonary trunk is larger, the aorta arises from the left ventricle which is the larger, the foramen ovale is wider and incompletely valved, and the ductus arteriosus is occluded at its pulmonary end. No doubt there has been delayed closure of the ductus arteriosus, but the fact that closure has commenced indicates that there was a fair degree of pressure in the pulmonary artery, an assumption supported by the clinical observations that the degree of cyanosis varied

much from time to time, and that there was a well-marked second pulmonic sound.

An interesting feature in the case is the multiplicity of lesions and consequent opportunities for the production of fluid veins, and yet the absence of any murmur for long periods.

Cases III and IV contrast as regards the development of the infundibular portion of the right ventricle with Case II. In the latter the infundibulum of the right ventricle is hypertrophied, whereas in the former it is hypoplastic. (Some additional measurements of the heart of Case II make this contrast clearer—wall-thickness of infundibular portion of right ventricle,  $\frac{7}{32}$  inch; maximum thickness of wall of right ventricle,  $\frac{12}{32}$  inch; and of left ventricle,  $\frac{11}{32}$  inch; length of left ventricle,  $1\frac{5}{8}$  inch. Weight of heart,  $1\frac{7}{8}$  oz.)

All three cases have in common a persistent inter-ventricular communication. Normally, in all mammals the ventricular separation is complete before birth, and, according to the data of Keibel and Mall,<sup>11</sup> in the human subject the ventricles are already completely separated in embryos 20·5 mm. long, the estimated age of which is seven weeks. In marsupials, however, the separation is only completed some time after birth; while in crocodiles a communication persists throughout life (the foramen of Panizza<sup>12</sup>).

---

#### REFERENCES.

<sup>10</sup> *Aberdeen University Studies*, No. 21, 1906, p. 55.

<sup>11</sup> Keibel and Mall, *Manual of Human Embryology*, 1910-12, pp. 199 and 997.

<sup>12</sup> Kollmann, *Lehrbuch der Entwicklungsgeschichte des Menschen*, 1898, p. 453.

(*To be continued.*)

---



## Obituary.

---

DAVID SIME, M.D. GLASG.,  
LONDON.

WE regret to announce the death of Dr. David Sime, which took place at his house in London on 13th March. A brilliant student of Glasgow University, Dr. Sime took the degrees of M.B., C.M. in 1870, and the degree of M.D. nine years later. He was for a short time house physician in Glasgow Royal Infirmary, and afterwards settled in Innellan. There he built up a successful practice, from which, however, he retired a good many years ago. He was the author of a treatise on rabies, and was an occasional contributor to the medical journals. He died at the age of 68 years.

---

GEORGE MUIR CONNOR, M.B. GLASG.,  
DENNISTOUN.

WE regret to announce the death of Mr. G. M. Connor, which took place at his house in Dennistoun on 13th July. Mr. Connor, who was 61 years of age, studied medicine at Glasgow University, where he took the degrees of M.B., C.M. in 1885. He was associated for a number of years with the Glasgow Medical Mission, of which he was superintendent. Settling thereafter in Dennistoun he rapidly acquired an extensive practice in the East-End of Glasgow, where he was a popular and well-known practitioner, whose loss will be felt by many patients endeared to him by his kindly disposition. His last days were saddened by the loss of his only son, killed in action at Ypres.

## CURRENT TOPICS.

---

COMMEMORATION DAY AT GLASGOW UNIVERSITY.—The observation of Commemoration Day at Glasgow University, which took place on 26th June, was on account of the war unmarked by the customary conferring of honorary degrees, the only such degree conferred being that of LL.D. bestowed upon Emeritus Professor John Ferguson. The proceedings took the form of a commemoration service followed by a graduation ceremony. After Kipling's "Recessional" had been sung by the choir, the Vice-Chancellor, Principal Sir Donald MacAlister, read the commemoration preface referring to the founders and benefactors of the University, and concluding with the following sentences:—"Lastly, in this hour of the nation's trial, we lift our hearts in thankfulness for the courage and devotion of our graduates and students who have given their lives for the cause of right and freedom. Their memory has become our glory, their high example our incentive to nobler endeavour in the time to come. For all who have of their goodwill in time past enriched the University; for all who by their skill in learning and science have enhanced her fame and usefulness, and in particular for William Smart, our first Adam Smith Professor of Political Economy; for all who have gone forth from her to fight and die for King and Country; for all her sons and daughters who by service and sacrifice have brought nearer the day of victory and righteous peace; for all still with us who love her and seek her good, let us now bless and praise Almighty God." The remainder of the service was conducted by Professor Cooper, Dean of the Faculty of Theology.

At the graduation ceremony which followed, Professor Gloag, in presenting Emeritus Professor Ferguson for the honorary degree of LL.D., recalled that he held one of the most important chairs in the Faculty of Medicine for more than forty years, and that when the first sod was cut for the buildings at Gilmorehill he stood even then a distinguished son of the



University. Professor Ferguson had often worthily represented the Senate at the centenaries and other ceremonial occasions of foreign universities. His work entitled him to rank as one of the leading authorities on the historical side of the science of chemistry. He was probably the only man in Scotland who was qualified to read Ben Jonson's *Alchemist* without the aid of notes. The results of this special knowledge had been given to the world, in a series of articles in the *Encyclopædia Britannica*, in the *Dictionary of National Biography*, and in various scientific magazines dealing with the lives and work of the earlier chemists and with the bibliography of the subject. In 1906 his studies took more permanent form by the publication of his magnum opus, *Bibliotheca Chemica*, being a catalogue of the alchemical, chemical, and pharmaceutical books in the collection of the late Dr. James Young. The Senate felt that he was one whose life and work had done honour to Glasgow, and they hoped that he might live long to enjoy the status of a Doctor of Laws, not only of St. Andrews, but of his own University.

The degree of Doctor of Science in Public Health was conferred upon William Barr, M.D.Glasg. (M.B. 1908), B.Sc. Dr. Barr, who is at present tuberculosis officer for the West Riding of Yorkshire, and was formerly assistant medical officer of health and school medical officer for Ayrshire and assistant superintendent of Ayrshire sanatoria, has made distinguished contributions to the study of public health.

UNIVERSITY OF GLASGOW: GRADUATION IN MEDICINE.—A graduation ceremony took place at Glasgow University on 19th July. Thirty students were presented for the medical degree. Principal Sir Donald MacAlister, who presided, in the course of a brief address, spoke of the claims of the R.A.M.C. on the services of well-trained surgeons, and congratulated the graduates on attaining the qualification which enabled them to respond to the call. The following is a list of the medical graduates:—

BACHELORS OF MEDICINE AND BACHELORS OF SURGERY  
(M.B., CH.B.)

I. WITH HONOURS.

Ernest M'Murchie Dunlop.

David Campbell, M.A., B.Sc.

II. WITH COMMENDATION.

Alexander Fisher M'Millan.  
 Arnot Campbell Hepburn.  
 George Carson Swanson, M.R.C.S. Eng.  
 Kenneth John Talbot Wilson.  
 Samuel John Henderson.

III. ORDINARY DEGREES.

Thomas Blackwood.	Oswald Johnston.
James Prowse Broom.	Robert William MacDonald.
Archibald Campbell Brown.	Douglas Bower M'Intosh.
John Alexander Buchanan.	John Wilson Maclean.
Winnifred Jane Crawford.	Mary Ann MacLennan MacLean.
John Williamson Dalglish.	Margaret Kay Mitchell.
James Ferguson Duthie.	Robert Rodger.
James Ewing.	Mary Scott.
Thomas Gray.	John Steele.
Eduardo Guillermo Hall-Sanchez.	Arthur Raphael Steven.
Jean Lawrie Hamilton.	John Banks Steven.
Rollo Isbister.	

In the final examination the following passed with distinction:—*In Surgery*—Ernest M'Murchie Dunlop; George Carson Swanson. *In Medicine*—David Campbell, M.A., B.Sc.; Arnot Campbell Hepburn. *In Midwifery*—David Campbell, M.A., B.Sc.; Ernest M'Murchie Dunlop.

THE TRIPLE QUALIFICATION.—The examinations of the Board of the Royal College of Physicians of Edinburgh, Royal College of Surgeons of Edinburgh, and Royal Faculty of Physicians and Surgeons of Glasgow were concluded at Edinburgh on 14th July. The following candidates, having passed the final examination, were admitted L.R.C.P.E., L.R.C.S.E., L.R.F.P. and S.G.:—Thomas Downie Renwick, Shapoor Dinshaw Vania, Frank Bertram Macaskie, Maurice Andrew White, Arthur Leslie Giblin, Elfrida Hester Brooke Coghill, John Ross, John Edward Kitchen, and Ethel Mary Dukes.

In the examinations concluded at Glasgow on 22nd July, the following candidates, having passed the final examination, were admitted L.R.C.P.E., L.R.C.S.E., L.R.F.P. and S.G.:—Richard Lloyd Jones, N. Wales; William Bruce Lawson, L.D.S., Glasgow; Michael Campbell, co. Antrim; Keki Sorabji Bhiwandiwalla, Bombay; Maniketh Vythi Menon, Madras; William Campbell Borrie, Birnam, Perthshire; John Alexander Murray, Cardonald;



John Alexander Smith, Glasgow ; James Young M'Lean, Glasgow ; Percy Hayes, Monkstown, co. Cork ; John Bygott, Gildersome, Leeds.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS: DENTAL PASSES.—At the recent examinations of the Royal Faculty of Physicians and Surgeons of Glasgow for the licence in dental surgery the following candidates passed the final examination, and were admitted licentiates in dental surgery:—John Arnold Johnstone, Stockton-on-Tees; Robert Andrew Brander, Glasgow; Ernest Muir Denham, Balmullo, Fife; Sidney Oscar Gadsby, Walsall; Archibald Brown Flockhart, Glasgow; Andrew Kuhn, Kimberley, South Africa; Herbert Reginald Matthews, London; Thomas Pearson, Glasgow; William George Shepherd Wilson, Greenock.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At the recent dental examinations just concluded the following candidates passed the final examination and were granted the diploma L.D.S.R.C.S.Edin.:—Duncan Macgregor, Edinburgh; Sampson Mathews Anderson, Co. Antrim; and Guillaume Jacobus Beyers, South Africa.

APPOINTMENTS.—The following appointments have recently been made:—

T. D. Newbigging, M.B., C.M.Glasg. (1896), to be Certifying Factory Surgeon for the Leadhills and Wanlockhead district, counties of Lanark and Dumfries.

*Royal Army Medical Corps* (26th June): To be temporary Lieutenants—J. MacInnes, M.B., Ch.B.Glasg. (1916); J. Whiteside, M.B., Ch.B.Glasg. (1913); B. Robertson, M.B., Ch.B.Glasg. (1904); R. J. Wilson, M.B., Ch.B.Glasg. (1915); R. M. Morison, M.B., Ch.B.Glasg. (1908); J. M'D. Matheson, M.B., Ch.B.Glasg. (1916); R. M. M'Minn, M.B., Ch.B.Glasg. (1914); A. M'D. Nevin, M.B., C.M.Glasg. (1900); D. Fisher, M.B., Ch.B.Glasg. (1909).

*4th July*: To be temporary Captains—Temporary Lieutenants L. L. Fyfe, M.B., Ch.B.Glasg. (1911); A. F. Ross, M.B., Ch.B.Glasg. (1915); D. J. M'Leish, M.D.Glasg. (M.B., 1904); J. E. Paterson, M.B., Ch.B.Glasg. (1911); R. B. F. M'Kail, M.B., Ch.B.

Glasg. (1909); T. A. O'Brien, M.B., Ch.B.Glasg. (1915); J. M'C. Lang, M.B., Ch.B.Glasg. (1911); J. D. Hart, M.B., Ch.B.Glasg. (1905). To be temporary Lieutenant—K. S. Macky, M.B., Ch.B.Glasg. (1916).

*7th July*: To be temporary Captains—Temporary Lieutenants C. G. Mackay, M.B., Ch.B.Glasg. (1904); J. M. Anderson, M.D.Glasg. (M.B., 1906); W. Macleod, M.B., Ch.B.Glasg. (1905); T. L. Fleming, M.B., Ch.B.Glasg. (1911); R. Rennie, M.B., Ch.B. Glasg. (1900). To be temporary Lieutenant—A. P. Robertson, M.B., C.M.Glasg. (1900).

*10th July*: To be temporary Captain—Temporary Lieutenant D. Mackenzie, M.D.Glasg. (M.B., 1891).

*15th July*: To be temporary Lieutenants—A. W. Ritchie, M.B., Ch.B.Glasg. (1916); R. N. Thomson, M.B., Ch.B.Glasg. (1914); T. Barbour, M.B., Ch.B.Glasg. (1906), B.Sc.

*Scottish Command Orders* (19th June): Temporary Major H. C. Marr, M.D.Glasg. (M.B., 1892), is appointed to act in a consultative capacity in connection with neurological cases in the Fourth Scottish General Hospital, Royal Victoria Red Cross Hospital, Dykebar, and other hospitals in the Command where his services may be required.

CENTRAL MIDWIVES' BOARD FOR SCOTLAND.—The *London Gazette* announces that the Central Midwives' Board for Scotland has been finally constituted as follows:—

Lady Balfour of Burleigh, Miss Alice Helen Turnbull, Miss Isabella Lewis Scrimgeour—appointed by the Lord President of the Council.

Sir Archibald Buchan-Hepburn—appointed by the Association of County Councils for Scotland.

Sir Robert Kirk Inches—appointed by the Convention of the Royal Burghs of Scotland.

Lady Susan Gordon Gilmour—appointed by the Queen Victoria Jubilee Institute for Nurses (Scottish Branch).

Mr. Archibald Campbell Munro, M.B., M.R.C.P., D.Sc. (P.H.)—appointed by the Society of Medical Officers of Health of Scotland.

Professor Sir John Halliday Croom, M.D., F.R.C.P.Edin., F.R.S.



—appointed by the University Courts of the Universities of Edinburgh and St. Andrews (conjointly).

Professor Murdoch Cameron, M.D., C.M.—appointed by the University Courts of the Universities of Glasgow and Aberdeen (conjointly).

Mr. James Haig Ferguson, M.D., F.R.C.P.Edin., F.R.C.S.Edin.—appointed by the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow (conjointly).

Mr. Michael Dewar, M.D., C.M.

Mr. John Wishart Kerr, M.B., Ch.B.—appointed by the Scottish Committee of the British Medical Association.

ROYAL MEDICAL BENEVOLENT FUND.—We have pleasure in acceding to the request of the Committee of the Royal Medical Benevolent Fund for publication of the following appeal. Further words than those of the appeal itself must surely be unnecessary to commend it to the generosity of our readers:—

#### ROYAL MEDICAL BENEVOLENT FUND.

11 CHANDOS STREET, CAVENDISH SQUARE,  
LONDON, W., 3rd July, 1916.

*(To the Editors of the "Glasgow Medical Journal.")*

DEAR SIRS,—The Royal Medical Benevolent Fund, the great Benevolent Society of the Medical Profession, is sorely in want of money now.

Though in ordinary times the Medical Profession supports its own poor, in these War times this is no longer possible. At the May meeting the Committee had a balance of only £17 in hand, and at the June meeting was faced with a deficit of £16. The demands were heavy and had to be met, and this could only be done by withdrawing £500 from the Bank.

As the direct outcome of the War not only are the ordinary cases of poverty greatly increased in number, but an entirely new class of case has arisen urgently requiring relief, in which without actual poverty there is great temporary distress—distress, however, which it is hoped will relieve itself soon after the War is over and the doctors serving return to civil duties.

At the outbreak of War, the Medical Profession responded freely to the Nation's call. The Territorial Medical Officers were at once

called out, and other medical men volunteered. Both alike had to leave their practice at very short notice, and often without being able to make adequate provision for its continuance and maintenance during their absence. Their pay went but little way to supply the loss which their absence entailed, for the working expenses of the practice could not be materially reduced. The result was that many families found themselves in very straitened circumstances. Rent, rates, and insurance brook no delay; but, worst of all, schoolbills could not be paid, and if help had not been quickly forthcoming the children would have suffered for the patriotism of their father.

The following are typical of the cases with which our Fund has had to deal:—

A young doctor, who had only been in practice a few years, volunteered for Service, and was killed in action a few days later. He left a widow, aged 35, with two young boys, aged  $3\frac{1}{2}$  and 1 year, entirely without means. The Fund voted £25 for her immediate necessities, and put her into communication with the Officers' Families Association, which gave further help.

A practitioner, aged 38, earning £700 to £800, volunteered for Service, leaving his practice in the hands of a neighbour who was not a success. There were two young children, and another baby was born shortly after the husband left. The wife contracted pneumonia and nearly died. A resident patient had to leave the house. Rent and other expenses led to a debt of about £80. This the doctor could not meet, and he hurried back from the trenches to save his home from being sold up. The Fund voted £25, the Guild gave £15, the Officers' Families' Association £25, and the Professional Classes War Relief Council further help, with the result that he returned to the front with his immediate anxieties relieved.

A captain in the Territorials was called out and had to leave his practice in the hands of a *locum* who proved a failure. There were seven children, aged 2 to 14. Financial difficulties arose and payment of the school fees became impossible. Between the Fund and Guild and Officers' Families' Association the necessary fees were raised, and clothing which was greatly required provided.

These cases show well the way in which the Fund works, not only by giving relief itself in money and kind, but also, by obtaining through co-operation with other benevolent societies, more substantial assistance than it could afford alone.

But there is another class in which the distress is perhaps even greater and adequate relief more difficult. It is that of men who left home and a good practice in vigorous health, and who have come back



crippled by wounds or with health impaired to a practice severely damaged by their absence, and without the strength or energy to regain the practice and position which they sacrificed.

Our Fund has set apart a special sum to meet emergency claims of this kind, yet the demands are so great that it will soon be exhausted. We cannot now rely on the Profession alone to supplement it largely, for the Medical Profession, like all other professions, is hit very hard by the War, and has no longer its old resources to draw upon.

What is required is an Emergency Fund large enough to deal adequately with these emergency cases arising directly out of the War, and for this we are driven to appeal to the public as well as to our own Profession.

We trust that our appeal will meet with a liberal response both from the public and from the Medical Profession, for unless fresh funds are quickly forthcoming, it will be impossible to continue the relief which is so urgently required.—We are, Faithfully yours,

JOHN TWEEDY, *President.*

SAMUEL WEST, *Hon. Treasurer.*

G. NEWTON PITT, *Hon. Secretary.*

SCOTTISH HOSPITAL FOR LIMBLESS SAILORS AND SOLDIERS.—That the public sympathy has been deeply moved on behalf of the sailors and soldiers whom the war will leave permanently crippled is shown by the rapidity with which subscriptions for their special hospital continue to flow in. The appeal of the Lord Provost and other office-bearers met with a ready response both in money and in articles of equipment. The flag day held in the streets of Glasgow on 26th June, fortunately in brilliant weather, realised the sum of £2,215. Subscriptions during the month included sums of £1,000 from Messrs. Wm. Beardmore & Co., Ltd., and the Bellahouston Bequest Fund, and £500 from the *Glasgow News* Shilling Fund, making a total to date of £6,000 from this source. A fête held in Irvine Royal Academy on 8th July realised over £400. On 15th July the total amount of contributions was £107,313, 13s. 8d.

WAR HONOURS FOR GLASGOW GRADUATES.—Since our last note on this subject appeared, the following additional honours have been conferred upon Glasgow graduates:—

Temporary Capt. R. McCowan Hill, M.B., R.A.M.C. (attached

2nd Battalion Argyll and Sutherland Highlanders), has been awarded the D.S.O. in recognition of his gallantry and devotion to duty in the field. The record says—"He went to an area which was under intense bombardment, amputated the leg of a wounded officer, and attended to other wounded under most difficult and dangerous circumstances. Finally, he accompanied two stretcher cases back under shell fire." Captain Hill is a graduate of Glasgow University, where he took the degrees of M.B., Ch.B. in 1906. Before the war he was in practice in London.

Surgeon-General Robert Porter, M.B., C.M.Glasg. (1879), was in the King's Birthday honours list appointed to be a Companion of the Bath (Military Division).

The same distinction was conferred upon Lieutenant-Colonel Charles Chevin Cumming, M.B., R.A.M.C., for valuable services rendered in connection with the war. Lieutenant-Colonel Cumming took the degrees of M.B., Ch.B. at Glasgow University in 1899. He is the second son of the late Dr. J. S. Cumming of Glasgow, whose eldest son, John Ghest Cumming, I.C.S., C.I.E., has also been distinguished in the Birthday honours, being made Companion of the Star of India.

In the same list appears the name of Lieutenant-Colonel T. H. Forrest, M.B., R.A.M.C. (T.F.), upon whom the D.S.O. has been bestowed. Lieutenant-Colonel Forrest graduated at Glasgow University in 1907, and has since been in practice in Birmingham.

The D.S.O. has also been awarded to Captain E. D. Gairdner, M.B., R.A.M.C. (T.F.). Captain Gairdner, to whose earlier war honours reference has been made in a previous issue, is a son of the late Sir William Gairdner, and is himself distinguished in the profession, holding in times of peace the post of surgeon to Ayr County Hospital.

On the same occasion the D.S.O. was awarded to Major C. Pinkerton Thomson, M.D., R.A.M.C. Major Thomson, who took the degrees of M.B., Ch.B. at Glasgow University in 1900, and that of M.D. in 1904, is attached to the Public Health Department of the Egyptian Government.

The following are the recipients of the Military Cross in the same list of honours:—

Captain W. A. Brechin, M.B., R.A.M.C. (T.F.). Captain



Brechin took the degrees of M.B., Ch.B.Glasg. in 1913. He had been house physician and house surgeon in the Glasgow Royal Infirmary before the outbreak of war.

Temporary Captain M. A. MacDonald, M.B., R.A.M.C. Captain MacDonald took the degrees of M.B., Ch.B.Glasg. in 1910.

In General Sir Douglas Haig's despatch of 30th April, published on 16th June, the following Glasgow graduates received mention :—

Colonel W. L. Gray, M.B., General Headquarters Staff. Colonel Gray took the degrees of M.B., C.M., with Commendation, at Glasgow University in 1885. He is also a B.Sc. of Edinburgh University, and in 1906 was Examiner in Chemistry in the University of Malta.

Captain T. I. Dun, M.B., R.A.M.C. (Special Reserve). A son of Dr. W. G. Dun, Glasgow, Captain Dun took the degrees of M.B., Ch.B. at Glasgow University in 1914, having studied at the University and the Anderson College.

Captain A. T. Logan, M.B., R.A.M.C. (Special Reserve). Captain Logan took the degrees of M.B., Ch.B.Glasg. in 1915.

Temporary Captain J. B. McCabe, M.B., R.A.M.C. In practice before the war at Leamington Spa, Captain McCabe took the degrees of M.B., Ch.B.Glasg. in 1905.

Captain D. C. Macdonald, M.B., R.A.M.C. (Special Reserve), took the degrees of M.B., Ch.B. in 1910.

Captain H. C. D. Rankin, M.B., R.A.M.C., took the degrees of M.B., Ch.B. in 1911.

Captain A. L. Robertson, M.B., R.A.M.C. (Special Reserve), graduated in 1912.

Temporary Lieutenant T. Strain, M.D., R.A.M.C., took the degrees of M.B., Ch.B. in 1906, and that of M.D. in 1910. He holds the D.P.H. of Cambridge, and before the war was medical officer of health and school medical officer to the Heston and Isleworth Urban District Council. He has written many papers and reports on subjects of hygienic interest.

In a supplement to the *London Gazette*, published on 24th June, appears the name of temporary Captain Walter Dawson, M.B., R.A.M.C., who has been awarded the D.S.O. Captain Dawson took the degrees of M.B., Ch.B.Glasg. in 1908, and the D.P.H.Liverp. in 1913. Before the war he was medical Superintendent of the Lancashire County Council Sanatorium at Elswick.

In General Sir Charles Monro's list of officers and men recommended "for distinguished and gallant services" rendered during his command of the Mediterranean Expeditionary Force occur the names of Captain E. D. Gairdner, M.B., and temporary Captain M. A. MacDonald, M.B., both of whom, as noted above, have received further distinction.

GLASGOW MEDICAL CASUALTIES.—Not a few casualties have occurred in recent months among medical graduates and students of Glasgow University.

Captain H. G. Wilson, R.A.M.C., attached Royal Irish Rifles, and wounded in May, took the degrees of M.B., Ch.B. in 1912. During his student career he was a famous forward in the University football team; he played six times in the Inter-city match; and he was awarded eighteen Irish international caps.

Second Lieutenant T. A. J. Aitchison, H.L.I., who has died at the age of 27 of wounds received in France in June, was a medical student of the University. He joined the colours more than a year ago, and had been three months in France.

Second Lieutenant J. Wight Wilson, wounded in July, is also a medical student of the University, and was a member of the O.T.C. at the outbreak of war.

Second Lieutenant W. M. Knox, wounded in the advance of 1st July, was a medical student when war broke out, and a keen member of the O.T.C. He was gazetted a year ago to the Royal Scots Fusiliers. His elder brother is a lieutenant in the R.A.M.C.

Captain Desmond Mullally, Northumberland Fusiliers, wounded in France on 26th June, was killed in action on 1st July. A son of Mr. William Mullally, of Glasgow, he was a medical student of Glasgow University and a member of the O.T.C.

Captain Thomas Errol Guthrie, R.A.M.C., killed in action in the beginning of July, was the only son of Dr. Thomas Orr Guthrie, New Zealand, a graduate of Glasgow University. Captain Guthrie, though an Edinburgh graduate, had taken part of his curriculum in Glasgow Royal Infirmary.

THE COLLECTION OF MEDICAL HERBS.—At a meeting held in Helensburgh in the month of June it was decided to constitute



an association to be named the Dumbartonshire Herb Growing Association, having as its main objects the growing, collection, preparation, and marketing of medical herbs, of which since war started this country has had very short supplies. The following committee was appointed:—President, Mrs. Leslie Denny, Lyleston, Cardross; Vice-President, Mrs. Gore, Artarman, Row; Hon. Secretary and Treasurer, Mr. J. Rennie, Wellcroft, Helensburgh, and Dr. J. Ewing Hunter, Millig, Helensburgh. It was decided to affiliate the Association to the Herb Growing Association, London, who are encouraging and instructing local associations. The instructions for June sent by the London Association refer to the collection and preparation of wild foxglove leaves. Arrangements were made to collect wild foxglove leaves in the neighbourhood of Helensburgh, a suitable place for drying them having already been secured.

RESULTS OF THE TREATMENT OF PHTHISIS UNDER THE INSURANCE ACT.—In a report submitted to the Sub-Committee on Sanatorium Benefit of the Burgh Insurance Committee of Glasgow, Mr. William Jones reviews the experiences of the Committee in the treatment of insured persons suffering from phthisis in sanatoria and hospitals. He states that the cases investigated were those admitted to and dismissed from institutions during the period July, 1912, to December, 1914, the total number dealt with being 1,431, of whom 1,101 were males and 330 females. While 87 per cent of “early” sanatorium cases were discharged with a record of having improved under treatment, in only 70 per cent was that improvement found to have been maintained. Similarly in the “intermediate” and “advanced” cases, while 58 per cent improved under treatment, only 36 per cent were recorded as having been able to continue in employment. “How far this backward movement may be assisted by conditions of housing, employment, &c., it is difficult,” the report states, “to determine. Various schemes have been suggested, such as employment bureaux, through which it might be possible to secure for the sanatorium patient an occupation which would ensure for him a continuance of open-air conditions. Farm colonies have also been suggested. Such institutions, however, would not solve the whole problem, which in many cases involves not only the maintenance of the health

of the patient but the maintenance of his dependants. The obvious conclusion, therefore, is that, to obtain any satisfactory results, it is essential treatment should be begun when the disease is in an early stage, and when there is a reasonable prospect that treatment is likely to prove of permanent benefit to the patient. Various factors contribute to delay. . . . In some cases . . . responsibility . . . appears to rest not with the patient himself but with the doctor who has been in attendance upon him, and who has not established a diagnosis of phthisis until a late date in the course of the disease. As matters at present are, results can scarcely be regarded as commensurate with the expenditure involved in the cost of treatment. Were it possible to secure treatment to all, or even to a large proportion of the persons attacked by phthisis at an early stage in the progress of the disease, then the probability of recovery would be much increased, and in place of the economic loss which at present prevails a valuable asset would be created in the increased life-capital of the nation."

Mr. Jones's report was submitted to a meeting of the Burgh Insurance Committee held in the Trades Hall on 12th July. Colonel R. D. M'Ewan, who presided, said that it was probably only by aggressive propaganda work that public opinion generally would be awakened to the consequences of neglect to obtain immediate and proper treatment, but unfortunately the present was not a suitable time during which to pursue any effort of that nature. The sub-committee therefore had only been able to recommend that the attention of medical practitioners and approved societies should be directed to the conclusions of the report, in the hope of some improvement being effected. The report demonstrated that sanatorium treatment did effect an improvement in the health of a large proportion of the cases treated. Except for the very early cases, however, it further demonstrated that the improvement was of a somewhat temporary character. It was obvious that the immediate return of the sanatorium patient to normal conditions of living was not attended with any reasonable measure of success, and it seemed necessary therefore that some further provision should be made before a patient was allowed to do so. According to present views, the farm colony or similar institution seemed most likely to secure the objects in



view. National afforestation schemes were at present under consideration, and it had occurred to him whether it would not be possible for the committee to get into touch with those having charge of the afforestation arrangements with a view to securing that the patients discharged from sanatoria or hospital, and able to undertake such work, should be afforded employment for such period as might be deemed desirable before they were permitted to return to their ordinary employment. He expressed regret that the call for economy had led to the stoppage of the scheme of residential schools for children, and suggested that the Sanatorium Benefit Committee should take such action as they saw fit to put pressure on public bodies to have the scheme gone on with. He suggested that they should get into touch with the Afforestation Scheme Committee, and that they should also consider how the housing conditions affected the need for sanatorium treatment.

The chairman's suggestions were adopted.

ST. ANDREW'S AMBULANCE ASSOCIATION.—The annual meeting of this Association was held in the Merchants' House, Glasgow, on 11th July, under the Presidency of Professor Sir Alexander Ogston, K.C.V.O.

The record of the Association in both civil and war work was reviewed in the thirty-third annual report. In regard to special war work, the report stated that the whole of the military hospitals in Scotland, officers and men, were within forty-eight hours of the outbreak of war staffed from the "home hospitals' reserve" of the St. Andrew's Ambulance Corps. The original staff of non-commissioned officers and men provided by the corps were transferred to foreign service in October, 1915, and the hospitals were within one week again staffed by members of the St. Andrew's Ambulance Corps. Two complete foreign service units were on service, and a unit had also been enlisted in the Royal Naval Sick Berth Reserve. Over 300 members of the women's sections had volunteered and been accepted for service as nurses in military hospitals at home and abroad. As to transport work, the report stated that the St. Andrew's Ambulance wagons and staff, along with the Red Cross Scottish Branch Transport Department, had attended at 145 hospital trains and assisted in removing upwards of 15,000 sick and wounded soldiers. Regarding

civil work, the patients conveyed during the year in the Association's wagons in Glasgow numbered 12,978. The number of pupils taught in sick-aid and nursing was 16,927.

The chairman, in moving the adoption of the report and accounts, described the achievement of the corps in the staffing of the military hospitals on the outbreak of war as perfectly marvellous. It showed the immense use which the Association had been to Scotland. The Association had lit the lamp of altruistic work of this kind in Scotland and had carried it on, and he hoped it would have many years of prosperity before it.

After the adoption of the report and the election of office-bearers, the chairman, on behalf of the Council, presented Commandant Justice, representing the Belgian Army Medical Service, with a handsomely equipped motor ambulance wagon for use in connection with the hospital of Hoogstæde. In making the presentation, the chairman said that we cherished the fragment of Belgium that was still in our hands. The feeling was universal among us all that one of the duties incumbent upon us—perhaps the first duty we must fulfil—was the restoration of Belgium. One could not dream of the war concluding without the complete restoration of Belgium and reparation for the wrongs done to it. The Belgians could rest assured that no effort would be left untried, and we might happily say to-day that these efforts were showing every evidence of being crowned with an early success.

Commandant Justice, in accepting possession of the ambulance, said that Glasgow had done royally in the help given both to the refugees from Belgium and to the gallant Belgian wounded. This spontaneous act by the Council of the Ambulance Association had deeply moved them.

The wagon, which was on view at the West George Street entrance to the Merchants' House, was afterwards inspected by the company.

RED CROSS SOCIETY: SCOTTISH BRANCH.—The work of the Scottish Branch of the British Red Cross Society continued to extend during the second quarter of the year. Our last notice brought its operations down to the end of March. Contributions in the first week of April included one of £200, the result of a prize drawing held in connection with the gift exhibition



of the Artists' Teachers' Exhibition Society Art Union. At this time the convener of the Transport Committee received from the Vicomtesse de la Panouse, president of the London Committee of the Croix Rouge Française, a letter of appreciation of the gift of the Scottish ambulance convoy which has for some time been working in the French lines, and of thanks for the gift of additional cars to extend the convoy. "Added to the sixteen ambulances and one touring car sent in January last," she wrote, "they will form what is, I think, one of the finest units working with the French forces." The Branch also arranged at this time to provide a special *x*-ray motor car for service with one of the French divisions. It was intimated at the same time that the Parks Committee of Glasgow Corporation had granted the use of about three and a half acres of ground adjacent to the military hospital in Bellahouston Park for the purpose of allowing the wounded soldiers more space for exercise and fresh air. When the ground was taken over it proved of much value for these purposes, and as it was on a slope it also afforded a means of testing the degree of recovery of overstrained hearts. In the middle of the month the Headquarters Organising Clothing Committee made an urgent appeal for mosquito nets, hospital nightshirts, and drawsheets. There were also announced subscriptions of a sum of £440 for the provision of a motor ambulance, being the proceeds of a matinee held at the Glasgow Pavilion Theatre in March, and a sum of £350 for the provision of an ambulance to be named the "Mrs. Martin Harvey Motor Ambulance," being the proceeds of an entertainment given by Mrs. David M'Cowan at 9 Park Circus Place, Glasgow. Sums of £200 and £80 for motor ambulances were received from the Stirlingshire Branch and from the British Women's Temperance Association. The St. Andrew's Society of Yokohama and Tokio sent a subscription of £150 to name three beds, and a further sum of £30, 17s. 2d. was received from Scottish missionaries in Manchuria. A fancy fair at Abbotsford Public School produced the sum of £125, which was devoted to the naming of two beds, and the provision of a chair for a paralysed soldier. The number of beds named in Scottish Red Cross hospitals was at this date 1,013. It was announced on 18th April that the Executive Committee had accepted from Mr. H. A. Wilson the generous gift of the house

and grounds of Craigmaddie, near Milngavie, and would utilise it as a V.A.D. auxiliary hospital. Further subscriptions intimated included sums of £500 from the City of Dundee Committee to provide a motor ambulance, and £200 from the Scottish Teachers' Fund for War Relief. £104, 15s. 4d. was sent by the St. Andrew Society of the City of Albany, N.Y.

At the annual meeting of the Renfrewshire Branch, held in Paisley under the presidency of Sir Thomas Glen Coats, Captain Colledge submitted a report dealing with the work of the branch. There were 23 women's and 5 men's Voluntary Aid Detachments in the county, comprising 1,016 women and 275 men, an increase of 127 from last year, to which had to be added 59 recruits not yet fully qualified. All the detachments had held themselves in readiness to be called up for service in a body if required, and many were meantime serving in military and Red Cross hospitals. The men's V.A.D.'s had rendered good service in conveying the wounded from the railway stations to the hospitals in the county, and many of them were on active service at home and abroad. The eight auxiliary hospitals connected with the county continued to be used for wounded soldiers, and were staffed by the V.A.D.'s. Fully £4,000 was subscribed in Renfrewshire for the Bellahouston Red Cross Hospital, in which there is a Renfrewshire block; and, also through the county, the trustees of the late Mr. Peter Coats subscribed £2,500 for the erection of the recreation and receiving blocks of that hospital. In addition, about £11,500 had been directly subscribed to the County Red Cross Fund.

Among the subscriptions intimated towards the end of the month were included £273, being a further monthly payment from the county of Renfrew European War Relief Committee; £173, being the proceeds of Paisley Red Cross flag day; £100 from the patrons of the Glasgow Coliseum to account of the cost of a motor ambulance, and £100 from George Heriot's School, Edinburgh.

May opened with the announcement of the receipt of subscriptions of £4,081 from the Scottish Drapers and Textile Trades Red Cross Fund, for the provision of ambulances, and of £300 contributed by the Burnside Ladies' Work Party for the naming of six beds. The Headquarters Organising Clothing



Committee intimated on 5th May that during the past week 6,553 garments were received in gifts at St. Andrew's Hall Store, and 7,161 were despatched during the same period to eighteen hospitals and one hospital ship. Among the hospitals abroad to which consignments were sent were:—Scottish Red Cross Hospital, Rouen; No. 9 Stationary Hospital, Havre; No. 13 Stationary Hospital, Boulogne; No. 11 General Hospital, Dannes-Camiers; Savoy Hotel Hospital, Paris-Plage; and Hôpital Auxiliaire de l'Entente Cordiale, Menton, France; and No. 18 Stationary Hospital, Egypt.

On the same date the committee announced that the total sum realised by Red Cross collecting boxes in aid of the general funds amounted to £5,639, 15s. 6d. Towards the middle of the month a subscription of £510, 4s. 2d., the proceeds of a moonlight fête in Buenos Aires, was received from Mr. and Mrs. Maitland Heriot, and a second contribution of £100 for the Motor Ambulance Fund was sent by the patrons of the Glasgow Coliseum. The Stores Committee appealed for gifts of basket chairs for the use of patients at Bellahouston Hospital. It was announced at a later date that during the month of April there were despatched from the Central Store for Surgical Dressings at 10 Burnbank Terrace, Glasgow, 31,834 bandages, dressings, and splints to hospitals at home and abroad, along with 582 packets of bought goods, such as wool, lint, &c. The home hospitals supplied ranged from Phisgill Hospital, Whitehorn, to the Red Cross Hospital at Peterhead. Supplies had been sent abroad to ambulances, casualty clearing stations, hospitals, ambulance trains, and hospital ships. Numerous letters of thanks testified to the value of the consignments.

On 25th May eleven motor ambulances, provided by the Scottish Drapery and Textile Trade at a cost of £4,345, were handed over to the Branch. The ceremony took place in the Council Hall of Glasgow City Chambers under the presidency of Lord Provost Dunlop, and in presence of a large company, among whom were Sir A. H. Pettigrew, chairman of the committee which organised the gift, and Sir George Beatson, who accepted the gift on behalf of the Red Cross Society. In acknowledging it he said that the cars would be of the greatest service to the sick and wounded. They might think it strange that after nearly two years of war they should still

want so many of those motor ambulances. But the truth was that the conditions of warfare had not changed in the slightest degree. The soldier was at present living and fighting practically underground, surrounded by a soil impregnated with the most virulent germs of disease. He pointed out the risk of consequent complications in the case of the wounded should there be delay in having them quickly transported to hospitals and put under proper surgical treatment. That was where the importance of the motor ambulance came in, and their value could not be over-estimated. Our army was great and growing in numbers every day, and the numbers of wounded were also increasing, and that was why so many motor ambulances were still required.

A sum of £271, 7s. 2d. was intimated as a monthly contribution from the County of Renfrew European War Relief Fund. A Red Cross fair held in St. Andrew's Halls on 27th May by members of the V.A.D., Glasgow 32, for the purpose of providing funds for a motor ambulance realised about £200.

The annual meeting of the Lanarkshire Branch was held on 30th May at Hamilton Palace, under the presidency of the Duchess of Hamilton. The Duchess submitted the annual report, which showed that the County Red Cross Depôt at the Riding School, Hamilton Palace, had during the past year received 50,958 articles, of which 33,099 were forwarded to the headquarters in Glasgow, and the remainder sent to various hospitals, &c. The financial statement brought out a total income of £6,927, 0s. 3d., and the year closed with a balance on hand of £4,048, 8s. 2d. on current account and deposit receipt. Both reports were unanimously adopted, the Duchess remarking that Lanarkshire had to be congratulated on being so well to the fore in this good work.

Among the subscriptions intimated in the first week of June was one of £158, 17s. 4d. from the Caledonian Club of Philadelphia, for the naming of three beds. It was announced that during the month of May 70,000 bandages, dressings, and splints were despatched from the central stores, and 690 packets of bought goods (cotton, wool, lint, &c.), were also sent out. Requisitions were sent to hospitals and casualty clearing stations in France, Belgium, Mesopotamia, India, and Egypt.

A deputation, which at the request of the War Executive had



made a visit of inspection in France, returned in the middle of June, after inspecting the Scottish units at work in Rouen and Paris, with a most favourable report. At Rouen they found that the Scottish Hospital was carrying on its tradition of medical, surgical, and nursing skill, and was on the best terms with the authorities. They were impressed by the improvements which had been effected in the accommodation of the staff and by the general air of comfort and amenity of the grounds and buildings. The deputation was also highly pleased with the condition of the Scottish Convoy at Rouen, which undertakes the entire motor ambulance work in this important hospital centre. They inspected the personnel and the cars, which number over 100, and were satisfied with the arrangements which exist for the maintenance and repair of vehicles. They found the Convoy very busily engaged by day and night, and were glad to learn from the director of medical services at Rouen that its work was highly appreciated. In Paris they visited l'Hôpital de l'Ecosse, which has been carried on by the Branch since September, 1915. They found that the hospital was working in a satisfactory manner, and was highly appreciated by the French military authorities. Its exceptional equipment and highly skilled personnel had resulted in its receiving a large number of serious cases, and it ranked as one of the most important auxiliary hospitals in France. As a recognition of the work of the Branch, the Scottish delegates were entertained to lunch by a representative gathering, which included M. Emile Boutroux, of the French Academy, and Madame Boutroux, Duchess d'Uzes, M. and Mme. J. L. Faure, Comte de Piessac, of the Service de Santé; the Dean of the Catholic Institute of Paris; l'Abbé Momus, of the Pasteur Institute; MM. Chaumet, Bonet Maury, Legouis, Dr. and Mme. Bonnet, and others. The deputation had several interviews with the Bureau Central of the Ministry of War regarding the Scottish Convoy of 30 ambulances which had been at work on the French front since the beginning of the year, and were pleased to find that this unit had earned for itself golden opinions from the military authorities.

It was intimated on 22nd June that arrangements had been completed between the Branch and Sir Arthur May, Naval Director of Medical Services, for the Scottish Society's rendering

aid to wounded sailors in Scotland. The Society was able to render assistance to the naval authorities in connection with the recent battle in the North Sea, and the arrangement made provided for close co-operation in many departments.

Since the Branch took up the collection of eggs in Scotland in August, 1915, 1,460,209 eggs had been distributed to Scottish hospitals.

A fully equipped ambulance, subscribed for by the people of Motherwell for use at the front, was presented to the Branch on 24th June. Colonel R. King Stewart of Murdostoun, county director of the Society, made the presentation, which was accepted by Sir George Beatson.

Among recent contributions were a sum of £1,000 from an anonymous donor, a sum of £200 from the proceeds of a free-gift sale held at Laurencekirk, a sum of £200 being the part proceeds of a free-will sale held by the Largs, Cumbrae and Wemyss Bay Agricultural Society, and a sum of £160 from a Red Cross sale by the ladies of Kirkcolm Parish.

The Headquarters Organising Clothing Committee appealed at this time for nurses' operating overalls, sleeveless semmits for the French sick and wounded, and cast-off clothing for disabled sailors from the North Sea battle awaiting their discharge.

The British Meat and Allied Trades Red Cross Fund sent to the chairman of the Collections Committee a cheque for £50,000, the first outcome of the organisation set on foot by Mr. Gordon Campbell, president of the Incorporated Society of Meat Importers.

A statement made to the council of the Branch at their annual meeting by the chairman, Sir George Beatson, was issued at the end of the month in the form of a pamphlet. It gave a fully detailed and very interesting account of the great scope of the Branch's operations during the past year, and also dealt at some length with the question of the assistance that might have to be furnished in future. Referring to the predominance of surgical over medical cases in the casualty list, Sir George Beatson pointed out that the freedom attained from infectious disease spoke volumes for the progress that had been made in the science of bacteriology, and was due largely to the employment of vaccines of bacteria or sera from the blood of



immunised animals, which conferred complete immunity on individuals for a considerable time. The injuries inflicted by shell fire, however, showed a severity far beyond that observed in previous campaigns, owing to the nature of the projectiles used. Apart from the seriousness of the wounds themselves, it was inevitable that, under the conditions prevailing, the wounds should have become contaminated by bacterial infection. There was urgent need, therefore, for early and proper surgical treatment. Motor transport had greatly aided in attaining this, while the use of motor *x*-ray wagons and motor laboratories had been of inestimable value in dealing with gunshot wounds. There would probably be a steady demand upon the Red Cross for the provision of more motor ambulances, and possibly also of *x*-ray motor wagons and laboratories. Their auxiliary hospitals would still be of great assistance in aiding the evacuation of the wounded, and plentiful supply of clean and suitable clothing would also be required.

Craigmaddie House, Milngavie, was formally opened as an auxiliary hospital by Lady Inverclyde on 29th June.

It was intimated on 30th June that the Branch had been invited by the Army Medical Service to undertake the treatment of orthopædics—the prevention and correction of deformities—among soldiers, and for this purpose they had resolved to add a new block to the Scottish National Red Cross Hospital at Bellahouston Park. Among the cases which would be suitable for orthopædic treatment were derangements and disabilities of joints, deformities and disabilities of feet, badly united fractures, injuries to nerves and tendons—generally speaking, the cases of men who would be completely laid aside unless something were done to improve their condition. By means of mechano-therapy, massage, and other processes, it was hoped to bridge the gulf between complete disability and comparative usefulness. Between 200 and 300 beds were to be devoted to the work. In addition, the Executive of the Scottish Red Cross had voted the sum of £5,000 for the establishment at Bellahouston of an institute for massage and electrical treatment. This would necessitate the construction of a new block containing 56 beds, and fully equipped for dealing with the cases that would be sent there. The War Office was most desirous that these centres

should be fully utilised, and steps were being taken to select from the military hospitals patients whose injuries might be suitable for transfer to institutions giving orthopædic treatment.

---

## NEW PREPARATIONS, &c.

From Messrs. Burroughs Wellcome & Co., London.

A sample of "Tabloid" Sodium Acid Sulphate. It is alleged that the acid set free when sodium acid sulphate is dissolved in water is sufficient to render harmless after half an hour most of the pathogenic bacteria present in the water. Unfortunately pathogenic germs are not so easily killed, and such a preparation might do great harm, in presence of an infected water-supply, by giving a false sense of security.

A sample of "Lubafax" Surgical Lubricant. Lubafax will be found useful for lubricating catheters, rectal tubes, specula, and vaginal nozzles. It is non-greasy and non-irritating to the hands, and is most useful in obstetric operations. It is in the form of a bland jelly, is put up in collapsible tubes, is readily soluble in water, and is convenient and cleanly in use.

From Messrs. Allen & Hanburys, Limited, London.

A sample of Bynogen. Bynogen consists of pure milk-protein and dextrin-maltose, with the glycerophosphates of soda, lime, and magnesia. The flavour is agreeable, and it can easily be taken by debilitated patients and children.

---

---



## REVIEWS.

*The Early Diagnosis of Heart Failure, and other Essays on the Heart and Circulation.* By T. STACEY WILSON, M.D., F.R.C.P.Ed. London: Smith, Elder & Co. 1915. (12s. 6d. net.)

IN the series of separate essays of which this volume consists will be found a mass of observations, for the most part new, which will be of the greatest value to the practitioner in his estimate of the working capacity of the heart. The essays have been written at various times during the last twenty years, and as they deal with closely related subjects they occasionally overlap; but repetition is one of the essential qualifications of a teacher, and Dr. Stacey Wilson has much to teach us. Designed to help the practitioner, his book is written with constant reference to, and insistence upon, clinical conditions. It deals with such subjects as the signs of heart failure where there is no enlargement of the heart, demonstrating that a diminution in its size may be an indication of muscular weakness; a high position of the diaphragm as a sign of heart weakness; and a diminution in the area of liver dulness as a similar indication. It also discusses dilatation of the heart due to overstrain, displacement of the heart, valvular disease in relation to ventricular expansion, and the diagnostic importance of pallor as a symptom of heart failure; and it closes with an account of an extremely interesting case of arrhythmia, which throws new light on the venous pulse and the action of the auricles. The text is followed by an extensive summary of the facts and arguments adduced in support of the various theses maintained, with page references which facilitate the use of the text. As has been said, the book contains much that is new, and its eminent merit is that it is essentially clinical. It is a record of careful and accurate research, and the reader who has mastered it will have much enlarged his knowledge

of cardiac disease and will be able to employ his therapeutic resources with greater confidence and success. Dr. Stacey Wilson has made a very important contribution to the study of the subject.

---

*A Pocket Medical Dictionary.* By G. M. GOULD, M.D. Seventh Edition. London: H. K. Lewis & Co. 1915. (5s. net.)

FEW words are necessary in commendation of the seventh edition of this well known and useful book. It presents all the attractive features which have gained it its wide popularity; it has been carefully brought up to date by the inclusion of the most recent terms; and care has been taken to select only those among them which are likely to be of permanent value. It may be confidently recommended as an almost indispensable companion to students of modern medical literature.

---

*The Involuntary Nervous System.* By WALTER HOLBROOK GASKELL, M.A., M.D., F.R.S. London: Longmans, Green & Co. 1916. (6s.)

THIS volume by the late Dr. W. H. Gaskell is the first of a series of monographs on physiology to be published under the editorship of Professor Starling. It forms a fitting introduction, as it deals with a series of phenomena of great importance in all branches of the science. It is particularly valuable as a record of the conclusions of a most original worker. Physiology owes a very great deal to the late author's patient investigation of the involuntary nervous system, researches which were never carried out in a narrow fashion, but were designed on the broadest lines, and even if all the conclusions could not be fully justified yet they were of immense value in stimulating further research. Although the present volume is no mere introduction to the subject, and although its greatest value will be to those who have some previous knowledge, it will be found to be indispensable to all workers who have to deal either directly



or indirectly with the involuntary nervous system, be they anatomists, physiologists, or clinicians.

Dr. Gaskell discusses the problem in twelve chapters, in which, after an excellent short history of the involuntary nervous system, he deals with the motor functions of the thoracic-lumbar (sympathetic), the bulbo-sacral, and the mid-brain outflows of connector nerves; the three following chapters are devoted to the inhibitory nerves, followed by chapters on the rhythmic movements, the innervation of glandular structures, the connector neurons, the phylogenetic origin of the sympathetic nervous system, and a chapter devoted to a final summary. The volume is provided with a good bibliography, and is well illustrated with coloured diagrams.

---

*Curschmann's Text-Book on Nervous Diseases.* By Various German Authors. Authorised English Edition. Edited by C. W. BURR, B.S., M.D. Philadelphia: P. Blakiston's Son & Co. 1915. Two Volumes. (\$12.00 net.)

THIS text-book was so well worth translating that it is a pity that somewhat more pains were not taken in the process. It is needless to say that much is to be learned from the work of men of the authority possessed by Curschmann, Hirsch, Krause, Schlesinger, and the other collaborators in the German edition, and that even a faithful translation of such a book cannot be without value to the neurologist; but the German work was published several years ago—if the reviewer's memory serves him, about 1909—and much has happened in neurology in the interval. Of these happenings, which should have been the subject of editorial comment, the editor takes no count. To take only two examples, Marie's name does not appear in connection with the subject of aphasia, and no reference is made to Monakow's contributions to it; while in connection with cerebro-spinal fever (still described as epidemic cerebro-spinal meningitis) the serum treatment is dismissed as in its infancy, and the editor corrects the now misleading statement merely by the briefest reference to Flexner's work, of which, in a book of this size, full details should have been given. We

have therefore a presentment, valuable indeed, of the subject of neurology as it stood in Germany at the time of publication of the original, to which the editor has added a brief discussion of certain aspects of the diagnosis and treatment of neurasthenia, psychasthenia, and hysteria, which he considers not sufficiently elaborated in the text. But the value of the book would have been much increased had it represented the position of the subject at the present day.

---

*Sleeping Sickness: a Record of Four Years' War against it in the Island of Principe.* By B. F. BRUTO DA COSTA, J. F. SANT ANNA, A. C. DOS SANTOS, and M. G. DE ARANJO ÁLVARES. Translated by J. A. WYLLIE, F.R.G.S., Lieutenant-Colonel, Indian Army (retired). Published for the Centro-Colonial, Lisbon, by Baillière, Tindall & Cox. 1916. (7s. 6d. net.)

THIS volume records the endeavour of a Portuguese medical mission to stamp out sleeping sickness in the Island of Principe. In the first part a full and interesting account is given of the geography and natural conditions of the island, the history of the epidemic, and the distribution and life conditions of the *Glossina palpalis*. From 1902 to 1913 the average mortality from sleeping sickness in Principe was 5·6 per cent, the total death-rate being 15·5 per cent. From 1907 to 1911 microscopic examination of the blood showed the presence of trypanosomes in 22·2 per cent of the inhabitants. The grave consequences of such a condition of affairs can easily be imagined, and in the second part of the book the war against the disease is described. In 1911, with a small staff which was gradually increased to 316 members, the work of exterminating the *Glossina palpalis* was begun in earnest. The water courses and swamps were exposed to sunlight by clearing away bushy vegetation and felling many forest trees. Swamps were reclaimed by draining and by filling them up. As far as possible all pigs and dogs were destroyed. The death sentence was also passed on civet cats and monkeys, although it is improbable that the glossina ever feeds on the blood of these animals. Many glossinæ were caught by Maldonado's method, *i.e.*, the wearing during the day of black cloths smeared with a viscous preparation. Infected



domestic animals were slaughtered, treatment by atoxyl being found of little avail. By law all persons bitten by the glossina received a preventive injection of atoxyl. Systematic blood examinations were made, and all infected persons isolated at once and treated by atoxyl. As a result of these well-devised measures the glossina has been exterminated in Principe. None have been caught since April, 1914. The cases of human trypanosomiasis have been reduced to about thirty, and these are isolated in a hospital under the direct supervision of the health officer.

The fourth part of the volume deals in an equally interesting fashion with the sanitary future of Principe, and the last part is devoted to a study of the trypanosomiasis of the island. The Portuguese medical mission is to be congratulated on the very satisfactory result of its labours. Its work was evidently well organised and well carried out, and should have far-reaching effects. Lieutenant-Colonel Wyllie has furnished an excellent translation. The volume is very readable, and is well and profusely illustrated.

---

*Diabetes Mellitus.* By NELLIS B. FOSTER, M.D. Philadelphia and London: J. B. Lippincott Company. 1915.

IN recent years a large amount of work has been done upon the pathogenesis of diabetes, but from the very nature of the subject it has been chiefly laboratory work, and has therefore been reported in special journals not easily accessible to the clinician. It has occurred to Dr. Foster that a conspectus and critical review of this work ought to be included in any complete presentation of the subject of diabetes mellitus, and therefore he has brought together in one volume whatever is known of diabetes both from the point of view of research and from the clinical side. That such a method of treating the subject is a useful one is sufficiently obvious; even a summary of the results of research cannot fail to be of benefit to the practitioner. But Dr. Foster's handling of the subject is more than a summary. It is a careful analysis and criticism of all the significant work that has been done in the last ten years, coupled with references

sufficiently extensive to enable the reader to pursue for himself any branch of the subject in which he may be interested. If after a perusal of the part of the volume devoted to laboratory work he finds that in many directions it has led as yet to no definite results, it is to be remembered that the problems of metabolic chemistry are among the most difficult the worker has to deal with, and that even our present imperfect knowledge has thrown much light on the important condition of acidosis. Further progress is to be expected not by belittling the results achieved, but by a careful study of them for hints of the direction in which research may prove useful. Such a purpose is admirably served by Dr. Foster's book, and the reader will derive from it both a scientific conception of diabetes and many valuable suggestions towards its scientific treatment.

---

*The Book of the Fly.* By G. HURLSTON HARDY. With an Introduction by HALFORD ROSS. London: William Heinemann. 1915. (2s. 6d. net.)

AT a time when the prevalence of fly-borne disease is widely recognised by the medical profession, but not yet sufficiently familiar to the general public, Major Hurlstone Hardy's book appears very appositely. Its appeal is not only to the laity, for while it describes in sufficiently untechnical language the varieties and the habits of the harmful species of flies, and gives an account of simple and yet effective methods for their destruction, it also provides much information of importance to the entomologist, and corrects many scientific misconceptions which have arisen from a lack of personal observation. Great as is the suffering to animals produced by stable-flies, gad-flies, œstrid flies, and other species, from the point of view of the spread of human disease it is the house-fly that matters, and against which a campaign of extermination should be waged. Should anyone object that every created thing must have a usefulness of its own, Major Hardy's answer is that the use of the house-fly is as a warning against human negligence. Even Uncle Toby, we may imagine, would have been less merciful had he been aware that "the house-fly, as we know it, is absolutely the



developed product of human insanitation; scientifically and practically it is a new 'species' of an old 'genus' established by a long course of breeding in man-made environment." Once we have learnt that the prevalence of flies in our houses is a reflection upon our personal habits, upon our means of disposal of sewage, manure, food refuse, and other such substances, we shall have gone a long way to a general effort towards extinction of the pest—a longer way, in all probability, than if the public were merely told, upon the authority of the medical profession, that flies are often responsible for the spread of disease. Any one may get a disease without loss of caste; no one likes to be thought unclean. The means of extinction are, fortunately, simple, and if they were generally adopted the summer plague of flies would rapidly be reduced to very small dimensions. Books like Major Hardy's, full as it is of the knowledge gained from long personal observation, and simply and effectively as its story is told, are of the highest value in directing attention both to the evil and to the means of cure.

---

*Transactions of American Laryngological Association.* Thirty-fifth and Thirty-sixth Annual Meetings. New York: Published by the Association. 1913, 1914.

THESE volumes contain much to interest specialists in diseases of the throat and nose, but it is impossible within the limits of a short notice to do more than indicate a few of the outstanding contributions.

Jonathan Wright in a comprehensive manner reviews the historical, etiological, and histological aspects of atrophic rhinitis. He maintains that the common underlying lesion binding together the allied clinical phenomena of the different varieties of atrophic rhinitis is periostitis of the thin scroll bones, a common enough process but in a unique situation. There is hardly any histological lesion that could serve as a common cause for the changes in the mucosa excepting a bone lesion which had interfered with the nutrition of the soft parts; the sequence of the histological changes is, however, not yet fully understood.

Several papers deal with the tonsils. George Shambaugh emphasises their importance as a focus for systemic infection. He believes that this relation has been more fully appreciated by the leading internists than by the general practitioner or throat specialist. This is probably because the internist is consulted regarding such cases, and is familiar with the effects of other foci of infection, *e.g.*, pyorrhœa, chronic appendicitis, infection of the genital tract, &c.; he is therefore prepared to recognise in a structure like the faucial tonsil, which is so frequently the seat of acute streptococcal infection, not only the source of acute systemic infection, *e.g.*, rheumatic fever, endocarditis, nephritis, but also of chronic affections, *e.g.*, arthritis, neuritis, nephritis, &c. Gordon Wilson, in his paper on the significance of plasma cells in the tonsil, holds that these cells are actively engaged in combating the toxins which pass through adenoid tissue, and their presence, instead of showing that the tonsil is diseased, indicates that it is functionally active. George B. Wood reports the results of his experiments on the passage of anthrax bacilli through the tonsils.

A series of five papers deals with phlegmons of the upper respiratory tract. A number of other contributions, chiefly clinical, complete the volume.

The volume for 1914 opens with Dr. Hubbard's presidential address, which treats of the influence of temperature, humidity, and ventilation on the air we breathe, and consequently on the causation of catarrhs. He proves the importance of establishing a proper humidity standard in our houses. Amongst other advantages, precipitation of dust takes place in a moist air, and thus lessens the liability of transmission of air-borne infections.

A symposium of papers is devoted to "Empyema of the nasal accessory sinuses in children under fourteen years of age." All of the authors regard these affections as commoner than is generally supposed; diphtheria, scarlet fever, and measles are given as the usual causes; and the methods of treatment applicable to young subjects are considered. We miss reference to the muco-purulent catarrh which is not infrequently observed in children as a sequela of one of the above-mentioned diseases, and in which the discharge from the accessory cavities is trivial as compared with that secreted by the nasal mucous membrane.



Braden Kyle gives directions for the chemical and physical examination of salivary secretion.

Other papers deal with—"The relation of the tonsils to thyroid disease," "Endo-nasal operation on tumour of the hypophysis," "Operative treatment of cleft palate," &c.

---

*The Gynecology of Obstetrics: An Exposition of the Pathologies Bearing Directly on Parturition.* By DAVID HADDEN, B.S., M.D. New York: The Macmillan Company. 1915. (17s. net.)

THE first part of this book is taken up with a minute description of the anatomy of the pelvic floor and the cervix, based upon dissections done by the author. The descriptions of the dissections are very minute, and many coloured plates are given; but we must confess that we cannot make much of the plates. The colouring is well done, and they make beautiful illustrations; but something more than an artistic effect is required. They are far too small, and it is quite impossible to make out the details. The mechanism of the relaxed outlet is fully discussed with the etiology and prevention of lacerations. He condemns episiotomy on anatomical grounds. The pathology of the cervix is fully dealt with, and many very fine microphotographs are given. These illustrations are exceedingly well done. He is a strong advocate of immediate repair of the cervix, even if there is no hæmorrhage; we thoroughly agree with this. He is a believer in the use of a continuous silkworm-gut suture in perineal repairs. Bladder infections are dealt with, and there is a chapter on kidney ptosis. We were not aware that kidney ptosis had any particular significance in obstetrics. The author has put a great deal of work into the production of the book, but we must confess that we have been disappointed with it.

---

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

---

EDITED BY ROY F. YOUNG, M.B., B.C.

---

### SURGERY.

**Operative v. Non-Operative Treatment of Fractures.** By S. C. McCoy (*American Journal of Surgery*, May, 1916).—The present discussions on the treatment of fractures have arisen from the fact that in a considerable number of cases the anatomical and functional results obtained from manipulation, fixation, and extension have been more or less satisfactory. The open method of treatment allows fragments to be replaced in good position, and also permits of early and frequent massage of muscles and mobilisation of joints, thus preventing atrophy and stiffness. It is clearly established that "a good anatomic result is the best guarantee of a good functional result." Recently, however, there has been a tendency on the part of some surgeons to use a fair functional result as a shield for a poor anatomical result. It is a serious consideration that the aseptic precautions which appear to answer admirably in abdominal work are inadequate in the surgery of bones and joints. In spite of that we are justified in advising open operation and the plating of fractures "in all instances where in no other way can a satisfactory functional result be obtained, and provided that the patient is a suitable subject for a major operation." Some cases will do quite well when, after incision, the fragments are placed in position even without a plate being used, since after replacement the fragments of a broken bone have less tendency to future displacement than has hitherto been believed. The author wishes to express preference for a delay of five or six days before resorting to open operation. This period allows the soft tissues practically to recover from trauma, and circulation in the blood and lymph vessels to be partially restored probably largely by the development of collaterals.

—CHARLES BENNETT.

**Retropharyngeal Abscess in Infants.** By W. M. B. (*American Journal of Surgery*, May, 1916).—In this leading article by the editor of the *American Journal of Surgery* the acute retropharyngeal abscess is dealt with, and not the chronic form arising from cervical spondylitis. Although the pathology is not yet entirely clear, it seems reasonable to believe that the infection arises from the pharynx, nasopharynx, or ear, and travels through the lymphatics to the retropharyngeal nodes and the tissues surrounding them. The



diagnosis is easy when the conspicuous signs are present, but it is often only made by digital exploration of the pharynx. It is an elegant procedure to open the abscess through the neck, but the disadvantages are the leaving of a scar, the necessity of having a surgeon skilled in the surgery of the neck, the need for general anæsthesia, and the possibility of an associated glandular abscess being opened into instead of the primary focus. Opening through the pharynx has the advantages that it can be done in an instant by any careful practitioner without an anæsthetic. Narrow-bladed scissors, guided by the fingers—a gag not being necessary—are pushed into the fluctuant swelling, and the child at once turned on its face.—CHARLES BENNETT.

---

## ANÆSTHETICS.

**Narco-Local Anæsthesia.** By R. E. Farr (*St. Paul Medical Journal*, May, 1916).—The writer believes that Crile's method of gas inhalation with the local use of novocaine is an ideal anæsthetic, but states that its main disadvantages are its great expense and its danger if improperly administered. He, therefore, advocates the use of morphine and scopolamine, given previous to the operation in small repeated doses, so as to bring the patient into a condition where he is more or less oblivious to what is going on about him. Novocaine is then used locally by means of a special apparatus designed by the author. He has used this method in several hundreds of cases with good results, though, like other anæsthetics, it is attended in some cases with after-sickness.—J. P. BOYD.

---

## *Books, Pamphlets, &c., Received.*

- Pathological Lying, Accusation, and Swindling: A Study in Forensic Psychology, by William Healy, A.B., M.D., and Mary Tenney Healy, B.L. London: Wm. Heinemann. (10s. 6d. net.)
- The Medical Annual: A Year Book of Treatment and Practitioner's Index, 1916. Thirty-fourth year. Bristol: John Wright & Sons, Limited.
- The Pathology of Tumours, by E. H. Kettle, M.D., B.S.Lond. With 126 illustrations. London: H. K. Lewis & Co., Limited. 1916.
- The Cure of Obesity and Obese Heart, by J. S. Kellett Smith, F.R.C.S.Eng. London: J. & A. Churchill. 1916. (3s. 6d. net.)
- Bernhardi and Creation: A New Theory of Evolution, by Sir James Crichton-Browne, M.D., D.Sc. Glasgow: James MacLehose & Son. 1916. (1s. net.)
- Clinical Disorders of the Heart Beat: A Handbook for Practitioners and Students. Third edition. By Thomas Lewis, M.D., D.Sc. London: Shaw & Sons.
- Mentally-Deficient Children: Their Treatment and Training, by G. E. Shuttleworth, B.A., M.D., and W. A. Potts, M.A., M.D. Fourth edition. London: H. K. Lewis & Co., Limited. 1916. (7s. 6d. net.)

- Localization by X-Ray and Stereoscropy*, by Sir James Mackenzie Davidson, M.B., C.M.Aberd. With 35 stereoscopic illustrations on special plates and other figures in the text. London: H. K. Lewis & Co., Limited. 1916. (7s. 6d. net.)
- Nerve Injuries and Their Treatment*, by Purves Stewart, M.A., M.D., F.R.C.P., and Arthur Evans, M.S., M.D., F.R.C.S. London: Henry Frowde and Hodder & Stoughton. 1916. (8s. 6d. net.)
- The Mortality from Cancer throughout the World*, by Frederick L. Hoffmann, LL.D. New Jersey: The Prudential Press. 1915.
- Nervous Disorders of Men: The Modern Psychological Conception of their Causes, Effects, and Rational Treatment*, by Bernard Hollander, M.D. London: Kegan Paul, Trench, Trübner & Co., Limited. 1916. (3s. 6d. net.)
- Nervous Disorders of Women: The Modern Psychological Conception of their Causes, Effects, and Rational Treatment*, by Bernard Hollander, M.D. London: Kegan Paul, Trench, Trübner & Co., Limited. 1916. (3s. 6d. net.)
- Abnormal Children (Nervous, Mischievous, Precocious, and Backward): A Book for Parents, Teachers, and Medical Officers of Schools*, by Bernard Hollander, M.D. Illustrated. London: Kegan Paul, Trench, Trübner & Co., Limited. 1916. (3s. 6d.)
- I.K. Therapy in Pulmonary Tuberculosis, with a Summary of Cases and 42 Illustrative Charts*, by William Barr, M.D., D.Sc.Glasg., D.P.H.Camb. Bristol: John Wright & Sons, Limited. 1916. (3s. 6d. net.)
- Pye's Surgical Handicraft: A Manual of Surgical Manipulations, Minor Surgery, and other Matters connected with the Work of House Surgeons and Surgical Dressers*, edited and largely rewritten by W. H. Clayton-Greene, B.A., M.B., B.C.Camb., F.R.C.S. Eng. Seventh edition, fully revised, with some additional matter and illustrations. Bristol: John Wright & Sons, Limited. 1916. (15s. net.)
- La Science Française. Tomes I et II. Exposition Universelle et Internationale de San Francisco.* Paris: Ministère de l'Instruction publique et des Beaux-Arts. 1915.
- Anatomia de los Conductos Biliares y de la Arteria Cística*, por Dr. Pedro Belou, Professor Titular de Anatomía Descriptiva, de la Facultad de Ciencias Médicas de Buenos Aires. Buenos Aires: Imp. "Oceana," Calle Chile, 525. 1915.
- The Respiratory Exchange of Animals and Man*, by August Krogh, Ph.D. With diagrams. London: Longmans, Green & Co. 1916. (6s. net.)
- Notes on the Causation of Cancer*, by the Hon. Rollo Russell. With a Preface by Dr. Dawtrey Drewitt. London: Longmans, Green & Co. 1916. (3s. 6d. net.)
- The Diagnosis of Nervous Diseases*, by Purves Stewart, C.B., M.D.Edin., F.R.C.P. Fourth edition, revised and enlarged. London: Edward Arnold. 1916. (15s. net.)
- Treatise on Fractures*, by John B. Roberts, A.M., M.D., F.A.C.S., and James A. Kelly, A.M., M.D. With 909 illustrations, radiograms, drawings, and photographs. London: J. B. Lippincott Company. (25s. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDED 22ND JULY, 1916.**

	WEEK ENDING				
	June 24.	July 1.	July 8.	July 15.	July 22.
Mean temperature, . . .	54·6°	53·0°	52·8°	53·2°	58·7°
Mean range of temperature between highest and lowest,	13·2°	5·6°	7·8°	6·7°	8·1°
Number of days on which rain fell, . . . . .	3	5	5	5	4
Amount of rainfall, . ins.	0·86	0·92	1·77	0·56	0·10
Deaths (corrected), . . .	296	259	269	286	232
Death-rates, . . . . .	14·1	12·4	12·9	13·7	11·1
Zymotic death-rates, . . .	1·3	1·2	0·7	1·1	0·7
Pulmonary death-rates, . .	3·3	2·7	2·5	2·4	2·2
DEATHS—					
Under 1 year, . . . . .	44	48	31	47	36
60 years and upwards, . .	69	68	73	73	66
DEATHS FROM—					
Small-pox, . . . . .	...	...	...	...	...
Measles, . . . . .	14	18	10	13	9
Scarlet fever, . . . . .	5	...	3	5	1
Diphtheria, . . . . .	5	2	1	2	...
Whooping-cough, . . . .	2	5	5	5	2
Enteric fever, . . . . .	1	1	1	...	1
Cerebro-spinal fever, . . .	2	...	...	2	4
Diarrhoea (under 2 years of age),	6	4	3	4	5
Bronchitis, pneumonia, and pleurisy, . . . . .	38	24	40	25	29
CASES REPORTED—					
Small-pox, . . . . .	...	...	...	...	...
Cerebro-spinal meningitis, .	4	1	1	4	3
Diphtheria and membranous croup, . . . . .	19	15	12	25	16
Erysipelas, . . . . .	19	28	22	17	21
Scarlet fever, . . . . .	82	86	68	62	59
Typhus fever, . . . . .	...	...	...	4	2
Enteric fever, . . . . .	9	2	3	1	4
Phthisis, . . . . .	64	48	50	47	31
Puerperal fever, . . . .	3	7	5	5	6
Measles,* . . . . .	362	282	172	144	184

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

---

No. III. SEPTEMBER, 1916.

---

ORIGINAL ARTICLES.

---

ULCERATION OF THE SMALL INTESTINE WITH  
FORMATION OF INDOL DERIVATIVES AND  
INDIGO-URIA.

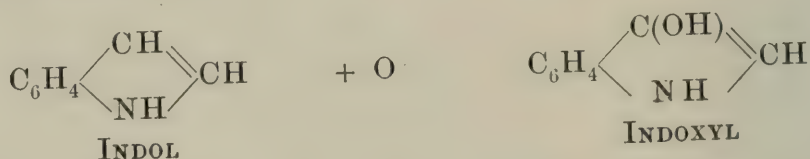
By DAVID RUTHERFORD ADAMS, M.D.,  
Assistant Surgeon, Kilmarnock Infirmary ; Temporary Lieutenant,  
Royal Army Medical Corps.

THE work of splitting up the proteid molecule is first seriously undertaken in the small intestine. Here polypeptides, mono- and di-amino acids are formed. It is in the form of amino acids that proteid food material is probably absorbed—to be diaminised by the liver with the formation of urea, and resynthesised later by the body cells. Some of the ingested proteid—or its partially digested derivatives—may remain unabsorbed in the small intestine and become a prey to putrefactive agencies. So long as the products of proteid digestion are adequately absorbed, putrefactive fermentation of proteid material is limited or absent in the small intestine. But even in apparent health a certain amount of proteid putrefaction may occur. Thus phenylalanin and tryptophan—monoamino acids with aromatic radicals—form phenol, indol, and skatol. It is in connection with the two last



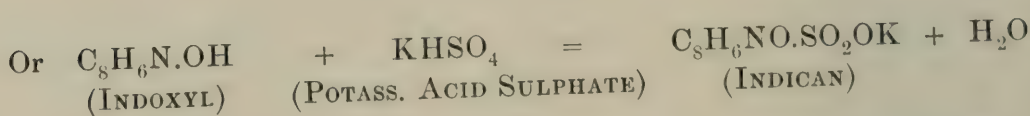
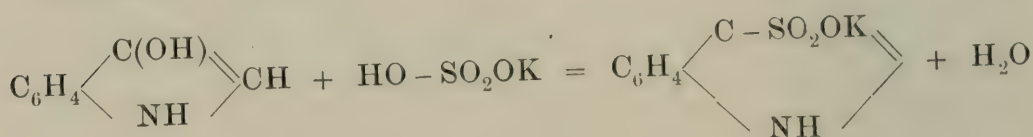
mentioned of these that the case under consideration at present is of interest.

As putrefaction of proteid proceeds further, indol becomes oxydised into indoxyl.

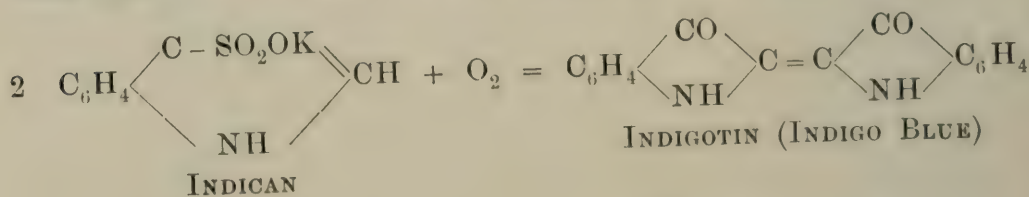


The latter, in combination with a sulphuric acid group and potassium, forms indoxyl potassium acid sulphate or indican, which substance is excreted in the urine. Similarly phenol is eliminated as an ethereal potassium salt of sulphuric acid, viz., phenyl sulphate of potass. Skatol is eliminated in like manner after forming skatoxyl. Thus far the usual course of digestion, absorption, and excretion of proteid in the small intestine may be sketchily summarised.

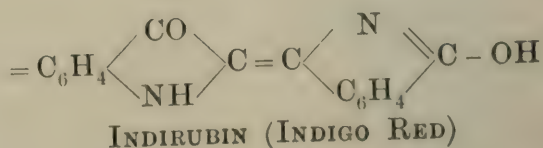
Looked at from a chemical point of view, further oxidation of the amino acids, past the stage of ethereal sulphates of potassium, should result in the formation of indoxyl and skatoxyl pigments, somewhat in the following fashion, taking indol as an example—



and with further oxidation, into the two pigments indigotin and indirubin. These two are isomeric  $\text{C}_{10}\text{H}_{16}\text{N}_2\text{O}_2$ .



Or



Some such process as this occurred in the following case, although it cannot be insisted that all the stages figured took place exactly in the sequence narrated above.

M. M., æt. 57 years, housewife, was admitted to Kilmarnock Infirmary on 6th October, 1915, as a case of nephritis.

For some weeks previously her health had been indifferent, but fourteen days before entering hospital she had an attack of vomiting of bile, accompanied by slight rise of temperature and diarrhoea, the motions being white. She took salts and the bowels moved again with a similar result. On examination at this time, pain over the lower abdomen and tenderness, most marked in the right flank, were noticed. Calomel and salts were administered, and the patient put on a milk diet. The general condition improved greatly. As time went on most of the symptoms disappeared, and the temperature, which had been fluctuating between 99° and 102° F., settled down. At the end of the first fortnight, however, the urine, always scanty, became very dark, and was thought to contain blood. Accordingly the patient was sent into hospital.

On admission to Kilmarnock Infirmary, the patient did not look very ill and was free from pain. Temperature, 99° F.; pulse, 120; respiration, 20 per minute. The tongue was moist and slightly furred. The skin was pale and "muddy," but there was no jaundice. The abdomen, though slightly swollen, was flaccid and admitted of free palpation without tenderness or rigidity in any region. No liver or splenic enlargement could be made out. A small quantity of highly coloured urine was passed just after admission, specific gravity 1030; no albumen, blood, or sugar was present. A little later the patient vomited curdled milk and some bile.

The following day the patient noticed that her urine was coloured blue and called attention to this. For three days the urine passed continued to contain blue colouring matter. The temperature at this time was for the most part subnormal, but rose to 99·2° F. on the third day. At the same time the abdomen became more swollen and tympanitic. Still she complained of no pain, and only very slight indefinite tenderness occurred on deeply palpating the lower abdomen. During the next three days intermittent vague abdominal pains were



felt, and tenderness on palpation of the abdomen grew more marked. Visible peristaltic movements of the small intestine were noticeable in the lower umbilical region and in the left flank. Swelling and tympanites also increased. Vomiting of curdled milk and small quantities of bile occurred about once a day from the time of admission, but after five days became much more frequent. The bowels moved loosely several times a day during the whole course of residence in hospital, and the motions were very pale for the first few days, but afterwards became slightly coloured. On the seventh day after admission the patient looked much worse. The temperature rose to  $101^{\circ}$  F., the pulse to 142, and the respirations to 42 per minute, and the patient suddenly died.

While in hospital the diet consisted solely of milk and barley water, and no drugs were given. Before admission the diet had been entirely milk for over a fortnight. She had taken one dose of a diuretic mixture containing citrate and acetate of potass with syrup of squills and tinctura hamamelidis the day before admission.

At the *post-mortem* examination I found evidence of a general peritonitis. Pus and fæces were free in the abdomen, and the coils of intestine were plastered over with recent fibrinous exudation. The fæces had apparently escaped from several perforations in the ileum. The intestines, large and small, were very much inflamed. The condition of the last two feet of the ileum was the most advanced, the perforations being here, while the upper parts of the small intestine seemed from the outside to be practically normal. On slitting the intestines, it was evident that a very severe inflammatory process had been proceeding, with ulcers at various stages of development, but all evidently acute. They were of the size and shape of a sixpence. Their edges were not shelving or undermined, but well demarcated by the surrounding mucosa, giving a "punched-out" appearance. In the most recent cases only a round hyperæmic spot marked the probable site of a future ulcer. In others the mucosa was eaten away, while some had only a thin layer of highly congested serous coat between them and the general peritoneal cavity. Those ulcers in the upper part of the jejunum were very much less frequent, and some

only in the very earliest stages. In no case were Peyer's patches involved in the ulceration. Neither were Peyer's patches any more inflamed than the rest of the mucous coat of the intestines. There were no ulcers in the large intestine nor in the stomach, and but one commencing as a hyperæmic spot in the lower end of the duodenum. Many mesenteric glands were inflamed. The liver and spleen were not enlarged, but both were soft and friable. The bile ducts and pancreatic ducts were patent. The kidneys, supra-renals, and other organs showed no gross macroscopic changes. No caseated glands or other signs of tuberculosis were to be seen.

Under the microscope sections of the small intestine, through the ulcerations and elsewhere, showed acute inflammatory changes in all the histological layers. Extremely abundant infiltration of leucocytes possessed the mucous coat, and there was everywhere marked hyperæmia. The peritoneum was very much inflamed. The large intestine showed inflammatory changes of no special character. The lymphatic glands showed inflammatory changes, but no evidence of tubercle. The spleen was very vascular, and fibrous thickening of the capsule and trabeculæ was to be seen. The sections of the liver showed fatty (toxic?) degeneration of the cells in the lobules. Large numbers of micro-organisms similar to bacillus coli were seen in all the sections examined.

Examination of the urine was carried out in some detail. It will be remembered that the sample passed on admission was of normal colour, though dark, and was free from albumen, blood, pus, sugar, and bile. I do not include this specimen in the following description of the urine analysis:—

The first sample, obtained on the day after admission to hospital very soon after being passed, was bluish-black in colour, with a bluish tinge to transmitted light. A dark blue deposit, not very dense, was apparently settling out, and occupied half the length of the urine glass. The specimen—specific gravity 1030, reaction acid—was tested for albumen (by boiling), urates, sugar (Fehling), blood, bile, and indican. Indican was not present (Jaffé's and M'Munn's tests). Albumen, blood, sugar, bile, and pus were all absent. The blue deposit settled out in a few days, leaving the supernatant fluid slightly



blue in colour. On filtration of a portion of the sample, the residue on the filter paper was entirely consumed by ignition on platinum foil, showing the probable organic nature of the material.

The second sample, passed the third day in hospital—specific gravity 1031, reaction acid—was dark-brown in colour, with dense dark-blue deposit. No albumen, pus, blood, sugar, or bile was present, but copious urates. Creatinine was present. Fehling's solution was partially reduced to a green colour. Indican was not present.

The third sample, passed a day later, was dark-brown, and in all respects similar to the second, but the blue deposit was less copious and the urine distinctly lighter in colour. It also gave no indican reaction.

The fourth sample, passed the following day, was also dark-brown in colour, though again lighter than the previous one, and was free from blue deposit even after standing for some hours. This sample, when tested for indican, gave a positive reaction. Otherwise it was similar to samples one, two, and three.

The fifth and sixth samples were clear of deposit, and still lighter in colour, the sixth being of a normal tint. Both of these samples responded to the indican test with a more decisive reaction than the fourth sample, as indicated by the colour density of the chloroform layer. None of the specimens gave any growth on culture media, and microscopically nothing was detected in the deposit but amorphous urates.

The next step was to determine the nature of the blue deposit. Samples of one, two, and three, which contained this deposit in varying amounts, and which did not give the indican reactions, were mixed, placed in a separator, and shaken up with chloroform. The chloroform layer settling at the bottom was of an intense blue colour. This was run off and the process repeated. The solutions in chloroform were mixed and divided, part being laid aside for spectroscopic examination. Another part of the blue chloroform solution was allowed to evaporate spontaneously, and the behaviour of the residue towards various solvents and reagents was noted. Shaken in cold water, the blue residue was insoluble; very slightly soluble to a very faint pink solution on heating. Shaken in dilute

HCl, the residue was partially soluble to a pink solution. Neutralising with strong KOH, the solution became blue again, and re-acidifying with HCl gave a pink solution once more. Shaken in alcohol, the blue residue was partially soluble to a violet solution in the cold—solubility being increased on heating—with subsequent deposition of blue-violet residue on cooling. In dilute  $\text{H}_2\text{SO}_4$  the blue residue was partially soluble to a pinkish solution. In the presence of alkaline reducing agents the blue colour of the residue was destroyed, and a yellow solution formed. Similarly, an alkaline solution of potassium ferri-cyanide discharged the blue colour. In phenol the blue residue was dissolved and a pinkish solution formed.

The behaviour of the blue residue from the filtered urine to these various tests apparently indicated—

1. The certain presence of indoxyl pigments such as indigotin (indigo blue) and indirubin (indigo red).

2. The probable presence of skatoxyl pigments in addition.

Spectroscopic examination of a chloroform solution of the blue residue showed a spectrum corresponding to that given by indigo blue.

The changes in the specimens of urine as the case proceeded, viz., decrease in blue colouring matter, and the appearance of indican in increasing amounts, if considered contemporaneously with the probable stage of the anatomical lesions in the ileum, would seem to indicate that, at the time when the ulcers there were at their earliest stages, the oxidation of proteid substances in the small intestine was complete, indol being oxidised to indican and this completely into the indoxyl pigments, *i.e.*, indigotin and indirubin, and skatol into skatoxyl pigments; while, as the ulcers developed towards, and resulted in, perforation, the oxidation process was less complete, and resulted in the formation and elimination of indican alone. Further, if the stage at which the ulceration in the lower end of the ileum had arrived had any causal relationship to the completeness of the oxidation process, it follows that the appearance of the fully oxidised product, indigo, was quite independent of the stage of the ulceration higher up the small intestine, the condition of the lower end of the ileum determining the extent of putrefactive oxidation of proteid derivatives..

Correlation of the symptoms and *post-mortem* findings is



rather difficult, and the exact etiological sequence of events rather obscure. The main points are—

1. Death was due to peritonitis and perforation of the ileum following on multiple ulceration of the greater part of the small intestine.

2. This ulceration process had been going on for at least a week before death.

3. The liver activities were to some extent in abeyance.

4. The ulcers of the small intestine were associated with marked invasion of the alimentary tissue by an organism similar to the bacillus coli which, as is well known, can produce indol from proteid and its derivatives.

5. At one stage complete oxidation of the amino acids into indigo and skatoxyl pigments took place in the body, causing indigo-uria.

6. At a later stage this oxidation was less complete, and indican appeared in the urine.

The rarity of the case almost forces the supposition that some other factor than bacillus coli was at work.

I wish to thank Dr. John Robertson, senior physician here, for permission to investigate and publish this case.

---

CASE OF ECTOPIC PREGNANCY WHICH HAD GONE  
BEYOND FULL TIME.

BY ROBERT JARDINE, M.D.

CASES of ectopic pregnancy are fairly common, and they are usually met with and operated upon in the early months. It is so rare for one to go to full time, or rather beyond it, that I feel warranted in publishing the following one:—

Mrs. B., i-gravida, æt. 30 years, was admitted to the Glasgow Royal Maternity and Women's Hospital on 21st November, 1912, with the history that at full time, three weeks previously, labour had come on, but the pains had ceased on the expulsion of what was said to have been a piece of placenta. The patient maintained that she still felt movements.

The history was that menstruation had ceased on 14th January, but on 21st March there had been severe abdominal pain, and a bloody discharge from the vagina. On 21st April, as the patient was suffering from a good deal of pain in the right side, a consultant was called in as it was thought the case was one of appendicitis. The consultant diagnosed that the patient was pregnant, and that there was no appendicitis, but he failed to recognise that the pregnancy was an extra-uterine one.

The pregnancy continued without very much discomfort until 29th October, when full time was supposed to have been reached. Labour pains came on with a slight discharge of blood, but they ceased on the expulsion of a mass which the attendant pronounced to be a bit of placenta.

The history was so clear that before examining the patient one could decide that it was either a case of extra-uterine gestation which had gone to full time, or a gestation in an imperforate horn of a double uterus. The so-called piece of placenta which has been expelled could be nothing else than a decidual cast.

On 23rd November Professor Cameron and I examined the



patient under an anæsthetic. The top of the tumour was close up to the diaphragm. The foetal parts could be palpated, the head being felt high up. There were no foetal heart sounds and no movements, although the patient had stated that she felt movements on the day of admission. We found the non-pregnant uterus was pushed to the left side. It was enlarged, and the cervical canal would admit a finger. The cavity was empty, but through the right side pressing it inwards a mass could be felt which was evidently the breech of the foetus. The diagnosis was an extra-uterine gestation which had gone beyond full time, and the foetus was dead.

With Dr. Mc'Bryde's assistance I operated on 25th November. I made a central incision fairly high up and cut through the outer layer of the sac, but not through the amnion. The sac was everywhere adherent to the parietal peritoneum and the bowels. I then passed my hand between the sac wall and the amnion, and found that I could sweep it right round. As the hand passed round the lower part where the placenta lay, I did not feel any particular resistance. I turned the child out of the abdomen, and as it came out the amnion ruptured, and some turbid liquor amnii escaped on to the table. The placenta, which was in the lower part of the abdomen, was easily lifted out. It looked like a flattened-out mass of ginger-bread. There was no bleeding from the site. I then tied the right broad ligament, and removed as much of the sac as was free, but the great bulk of it had to be left. It was packed with iodoform gauze and the wound partially closed. The patient had lost very little blood, and she stood the operation well. The packing was kept in for several days and then gradually lessened in amount. The recovery was uninterrupted, and the wound had closed by 31st December, when the patient was dismissed. The lower part of the scar was weak where the packing had been.

The child had apparently reached full time. It was beginning to macerate, so it probably had perished about the time of the spurious labour.

On 6th July, 1914, I readmitted the patient on account of a fair-sized hernia at the lower part of the scar, and operated two days later. On opening the abdomen, I could find no trace of the remains of sac, and all traces of adhesions had

disappeared except some in Douglas's pouch, which was partially obliterated. The upper part of the uterus was quite free. After removing the hernial tissue, I closed the abdomen in three layers, and the result was most satisfactory. The patient was discharged with a very firm cicatrix.

It was interesting to see the inside of the abdomen, and to find what a clean sweep nature had made of the sac and adhesions.

In the first operation the child had been dead long enough for the placental sinuses to be closed, and this allowed of immediate removal of the placenta. If the child had been alive, or just recently dead, the operation would have been a much more difficult one. Immediate removal of the placenta would have been impracticable, as the hæmorrhage from the sinuses would have been uncontrollable. In such a case, the placenta has to be left behind to separate gradually, and the convalescence will be very much prolonged, and the risk of septic absorption will be increased. I was struck with the ease with which I was able to separate the amnion and turn the sac out. It was curious to see the cord attached to the lower part. I felt no resistance when I broke through the vessels from the cord to the placenta. If I should have another case to operate upon, I shall try to do the same thing instead of cutting right into the sac and removing the child as in an ordinary Cæsarean section.

---



SOME VARIETIES OF CONGENITAL HEART DISEASE  
—PATENT FORAMEN OVALE—PATENT INTER-  
VENTRICULAR SEPTUM—PULMONIC STENOSIS—  
PATENT DUCTUS ARTERIOSUS.

By LEONARD FINDLAY, M.D.,

Visiting Physician, Royal Hospital for Sick Children, Glasgow ;

AND

W. BLAIR M. MARTIN, M.D.,

Lecturer in Bacteriology, Glasgow University, and Pathologist, Royal Hospital  
for Sick Children, Glasgow.

(*From the Royal Hospital for Sick Children, Glasgow.*)

(*Concluded from p. 91.*)

CASE V.—*Patent ductus arteriosus.*

A. B., female, æt. 1 month, was admitted to hospital on account of a rash of one week's duration and inability to suck of two days' duration.

Father and mother are both alive and well. There have been two pregnancies—the first child (æt. 2 years) is healthy. The second child, the patient, seemed quite normal at birth. At the age of 10 days the buttocks were noticed to be excoriated, but the child continued to thrive. At 3 weeks the excoriation of the buttocks had increased and a rash appeared round the mouth, and, four days ago, on the palms of the hands. The child has all along been breast fed. During the past few days it has rapidly wasted, and has refused the breast during the last two days.

On admission it was noted that the child was undersized—weight, 6 lb. 12 oz.—exceedingly collapsed, and presented an eczematous condition of the chin, palms of the hands, soles of the feet, and of the buttocks. Physical examination of the chest and abdomen revealed nothing abnormal. Wassermann reaction in mother was positive.

The child only lived for some eight hours after admission, and shortly before death became extremely cyanosed.

*Summary of lesions found post-mortem.*—Congenital syphilis—Patent foramen ovale and patent ductus arteriosus—Venous congestion of organs.

*Details of post-mortem examination.*—The body measures 19 inches, is emaciated, weighing 6 lb. 12 oz., but not abnormally developed. There is an eczematous eruption in the circumoral and perineal regions, and on the adjacent inner aspect of the thighs, and the epithelium of the palms and soles is desquamating.

The thymus is small.

The pericardium contains a little clear serous fluid.

The heart weighs 1 oz. The apex is formed by the left ventricle, but the right ventricular chamber is nearly as large as the left. The auricles are of ordinary dimensions and the great vessels arise normally at the base. The foramen ovale is provided with a large thin valve which can completely close it, but the orifice admits the cone to 0·25 inch. The ventricles are completely separated. The left measured  $1\frac{3}{16}$  inch long and has a maximum wall thickness of  $\frac{9}{32}$  inch, while that of the right is  $\frac{6}{32}$  inch. The valves are healthy, and the orifices measure—aortic 0·3, mitral 0·5, pulmonic 0·3, and tricuspid 0·55 inch in diameter respectively. The ductus arteriosus has a normal course, measures  $\frac{1}{4}$  inch in length and is widely patent, the diameter being 0·1 inch; the diameter of the thoracic aorta is 0·2 inch.

The pleural sacs are normal.

The right lung weighs  $1\frac{1}{4}$  oz., the left  $\frac{7}{8}$  oz. They show merely basal congestion.

The diaphragm and abdominal viscera are normally developed.

The liver weighs  $5\frac{1}{4}$  oz., and is dark coloured with indistinct lobulation.

The spleen weighs  $\frac{1}{2}$  oz., and measures 2 inches long and  $1\frac{1}{4}$  inch broad. It is slightly softened, dark in colour and the Malpighian bodies are obscured.

The kidneys weigh  $\frac{3}{4}$  oz. each, measure  $1\frac{3}{4}$  inch long, and



have a cortical thickness of  $\frac{3}{32}$  inch. They show venous congestion.

The medulla of the suprarenal bodies is prominent and congested.

The other abdominal viscera present no noteworthy gross changes.

Portions of all the organs were examined histologically, and they showed merely venous congestion. An early stage of the cutaneous lesion was also examined, the margin of the perineal eruption being selected; dilatation of the vessels of the corium and erosion of the epidermis, with little or no cellular infiltration, were the only pathological changes disclosed.

There was nothing suggestive of Wegner's "osteochondritis" in either the lower end of the femur or at the costo-chondral junction. A small portion of the cardiac muscle was selected for a search for the *Spirochæta pallida* using the Levaditi-Manouélian method, but with negative result.

In view of the age of the infant it might be doubted by some whether this case can be classed as a case of "congenital heart disease." Rauchfuss,<sup>13</sup> indeed, when estimating the frequency of patent ductus arteriosus did not utilise the material in the Foundling Hospital at Petrograd, of which he had charge, because the vast majority of the patients were under 1 month old. The degree of patency in this case, however, is certainly abnormal for a child of 1 month. Normally, closure begins immediately after birth, and the ductus is practically functionless within a few hours; according to most observers it is only permeable to a needle after fourteen days, and by the end of the third week is occluded, at least at its pulmonic end.

The chief interest in this case is not in the physical signs diagnostic of patent ductus arteriosus, but centres round the factors which cause delay in its closure.

The normal mode of closure has been the subject of much controversy, but unanimity of opinion has not yet been attained. Most authorities consider that the circulatory

alterations in course and blood-pressure ensuing at birth, with or without change in the disposition of the thoracic viscera occurring at the same time, and, consequent on the first respirations, are the most important factors. This mechanical theory apparently offers an adequate explanation for those instances of persistent ductus found with pulmonary atelectasis, or with pulmonic stenosis or some other gross cardiac anomaly, since in these conditions the usual post-partum circulatory readjustments cannot ensue.

But that this explanation is not entirely satisfactory is shown by the occurrence of a closed ductus in some rare cases of aortic or pulmonic stenosis. Vierordt<sup>14</sup> and Hinze,<sup>15</sup> in consequence, have suggested some inherent property of the ductus promoting closure, and many histological investigations have been made to elucidate this point, but with very discordant results.

Rokitansky<sup>16</sup> in 1844 held the ductus and pulmonary artery to be essentially of similar structure. Langer<sup>17</sup> in 1857 described the media as almost entirely devoid of elastic tissue. In 1902 Pfeifer<sup>18</sup> returned to the view that "the ductus Botalli shows no variation in its morphological structure from other great arteries, *e.g.*, the aorta of the new-born," although in his detailed description he speaks of circular muscular fibres alternating with the elastic fibres in the media. Klotz,<sup>19</sup> however, writing in 1907, emphasises that the ductus has a structure peculiar to itself and markedly different from that of either the pulmonary artery or aorta. He describes the media as being "made up almost entirely of muscle tissue, but having a fine network of elastic fibres intertwining the muscle bundles and linking them together. The musculature differs from that in other vessels in possessing no regular arrangement." He also says, "One is impressed with the relative abundance of muscle tissue in the wall of the vessel."

These different ideas regarding the structure of the ductus are reflected in the views on closure held by the various observers. Klotz believes that closure of the ductus "depends mainly on two factors:—(1) The reduction in the blood-pressure in the right heart and pulmonary system, and (2) the muscular contraction of its walls," while Pfeifer implicates the



elastic tissue, and states that it proliferates at the expense of the muscle during closure.

In view of these discrepancies we have made some personal observations on the structure of the ductus, and have satisfied ourselves from the examination of several specimens that it has, as Klotz affirmed, a structure peculiar to itself and quite different from that of either aorta or pulmonary artery. As seen in transverse section, there are notable variations in the thickness of the wall at different parts of its circumference, and its lumen is in consequence irregular (Figs. 2 and 3). Contrasted with the aorta (Fig. 1), the wall is on the whole thicker though less dense, and it is distinctly poorer in elastic tissue, the fibres being not only much finer and shorter, but also less regularly arranged and in the form of a network rather than as a series of concentric lamellæ. Its three coats are not sharply differentiated from one another, particularly media and adventitia. The adventitia is dense and relatively rich in broad elastic tissue fibres. A striking feature of the media is its muscle content, bundles running both circularly and longitudinally though somewhat irregularly disposed. Towards its inner aspect the media is looser in texture and in places actually vacuolated (Fig. 2). But perhaps the most outstanding feature in the structure of the ductus of the full term foetus is its intima, which here and there is markedly thickened in the form of large pads which project into, and contribute towards the irregularity of, the lumen. These pads are rich in fine lamellæ of elastic tissue, which have apparently arisen by a fibrillation of the internal elastic lamina. The internal elastic lamina itself, even when not split up into fibrillæ, does not form a continuous broad band or layer, but is frequently interrupted by large gaps (Fig. 2). These very peculiarities of structure would appear to us to be intimately associated with its proclivity to closure. The interruption of the internal elastic lamina would facilitate the infolding of the wall (Fig. 4), which its internal loose texture would permit, and which the ante-natal obliterative endarteritic intimal changes would accentuate.

The mechanism of closure in our view is complex, and is contributed to (1) by the muscularity of the wall predisposing





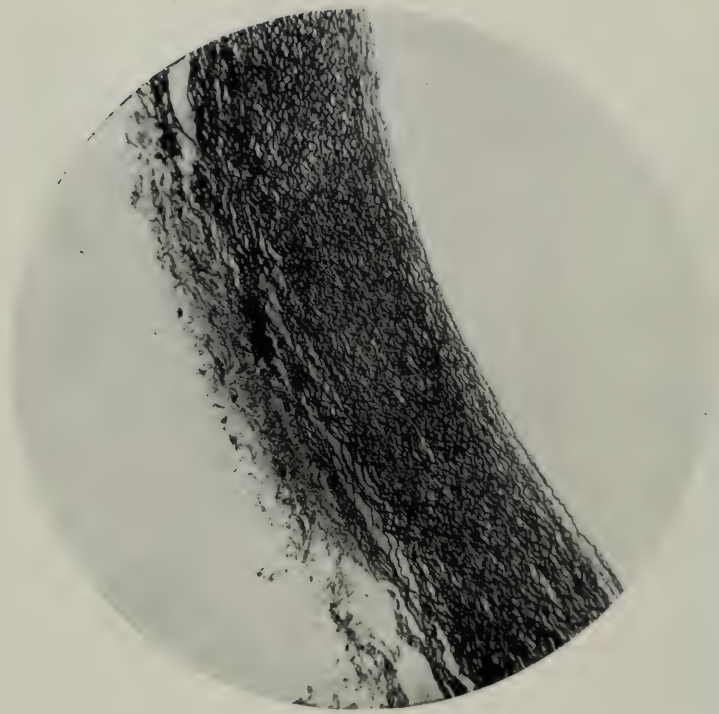


FIG. 1.  
Aorta of Case V. [Normal for Infants.]

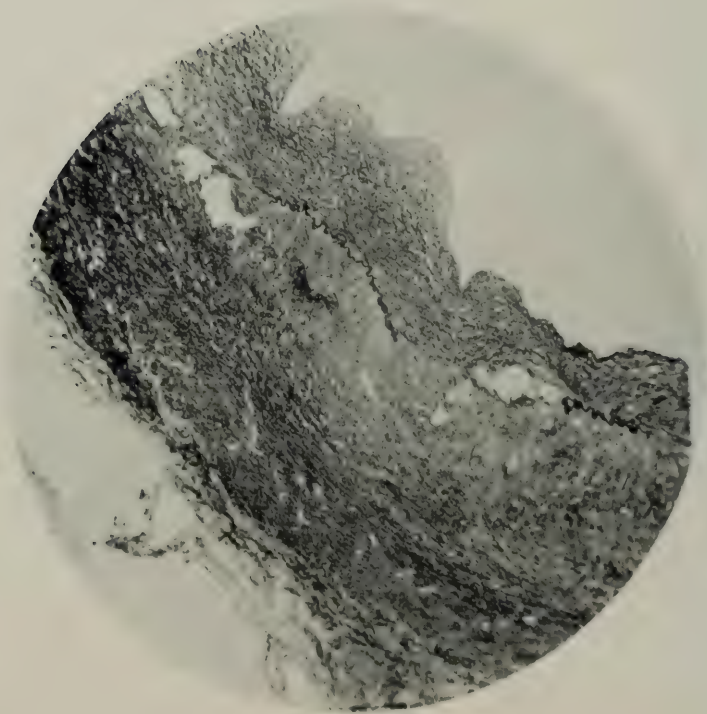


FIG. 2.  
Ductus arteriosus of a full term still-born fetus (Wassermann reaction negative).  
[Normal before birth.]

*All 40 diameters (Koristka 16 mm. apochromatic objective).  
Weigert's elastic tissue stain.*

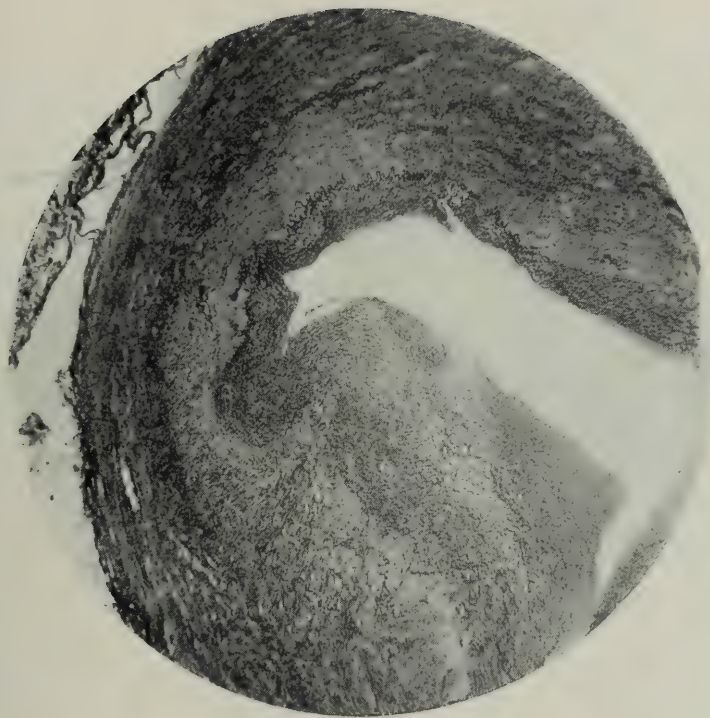


FIG. 3.

Ductus arteriosus of Case V. [Abnormally patent.]

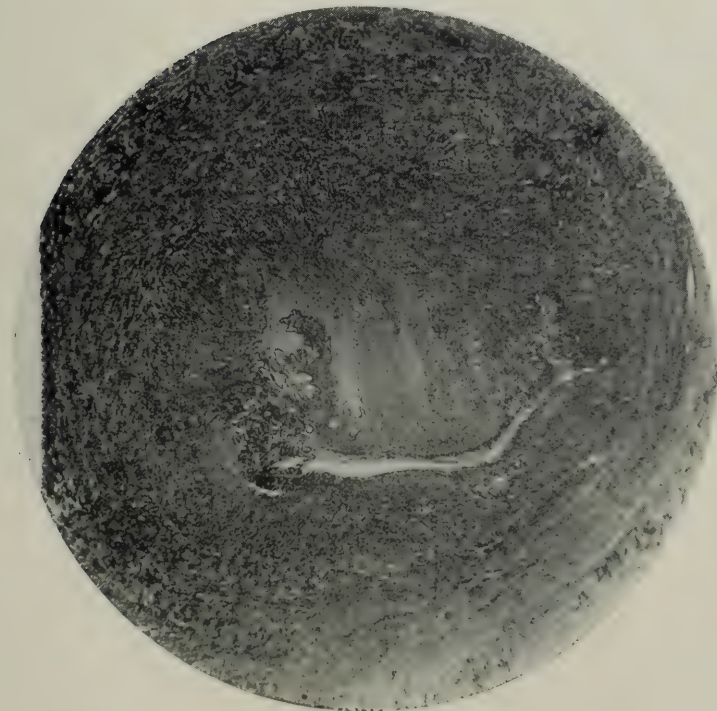


FIG. 4.

Ductus arteriosus from a child, aged 11 months (Wassermann reaction negative).  
[Normal mode of closure.]

*All 40 diameters (Koristka 16 mm. apochromatic objective).  
Weigert's elastic tissue stain.*





to constriction, (2) by the intimal pads which are capable of practically occluding the lumen of the contracted ductus, and (3) to a subsidiary degree by the blood-pressure changes and the altered disposition of the thoracic organs ensuing at birth. The media is undoubtedly rich in muscle, and it may be that contraction of these muscle elements is initiated at a definite period in the life of the individual, just as is the case with the pregnant uterus at parturition. The intimal pads which are present at birth, as our specimens from full time still-born (instrumental delivery) foetuses show, are no doubt a provision of Nature to facilitate the obsolescence of the ductus. Pfeifer's contention that the elastic tissue of the media is actively concerned in the closure is to be doubted; apparently he has been misled as to the relative amounts of elastic tissue in open and closed specimens by not making allowance for the condensation of the tissue elements of the wall in the contracted vessel. It is noteworthy that thrombosis plays a very minor part in the obliteration of the ductus, a fact commented upon by recent observers.

As regards the ductus in our case, the only notable departure from normal in the structure of the wall is its paucity in muscle elements, but we consider this deficiency of basal import in the delayed closure. Can this deficiency in muscle be explained? Although there were no indubitable histological evidences of syphilis in the organs of this case, and spirochætes were not detected in the one portion of tissue selected for examination, we have no doubt that the case was one of congenital syphilis. The clinical picture was characteristic, and confirmation is given by the fact that the mother reacted positively to the Wassermann test. Vascular lesions are well known in syphilis as affecting vessels of either elastic or muscular type. The characteristic changes in syphilis are focal cellular infiltrations of adventitia and media with intimal thickening and destruction of both elastic and muscular elements. In this case, however, there was certainly no cellular infiltration or marked disintegration of elastic tissue, deficiency of muscle being the prominent feature.

From the diagnostic standpoint our case is, as previously mentioned, of secondary interest, as the only symptom referable



to the cardio-vascular system was the cyanosis, which at the time was ascribed to the cardiac weakness and poor circulation consequent on the syphilitic infection. There was no enlargement of the cardiac dulness, and no murmur was audible.

Nevertheless, persistent ductus arteriosus, as an isolated lesion, has been diagnosed during early infancy and verified *post-mortem*, and in a recent article by Abelman<sup>20</sup> the following are the diagnostic points arranged in order of merit:—

1. A loud rough systolic murmur, sometimes continued into diastole, with its seat of maximum intensity in the second left interspace.

2. Good conduction of the murmur into the carotids and subclavians, and to the left interscapular space behind.

3. Thrill in the neighbourhood of the manubrium sterni.

4. Marked accentuation of the second pulmonic sound.

5. Increase of the cardiac dulness to the right and to the left.

6. Gerhardt's quadrangular area of dulness in the second left interspace.

7. X-ray shadow of the duct which, with the fluorescent screen, is seen to pulsate.

8. Difference between the two radial pulses, and the presence of a *pulsus paradoxus*.

From a survey of the literature of recorded examples we are inclined to the view that the diagnostic value of some of these signs is over-estimated. So far as we have been able to find, no *x-ray* diagnosis has been confirmed by an autopsy. The small area of dulness in the second left interspace described by Gerhardt, and the inequality of the radial pulses noted by François Franck, have not been observed by many able clinicians, and in view of the anatomical relationships it is difficult to conceive how such signs should be produced.

*Note to Case I.*—Since this paper went to press we have found that Thomson and Drummond<sup>21</sup> have recorded a case of patent foramen ovale in an older child ( $9\frac{3}{4}$  years), with a basal systolic murmur.

REFERENCES.

- <sup>13</sup> Rauchfuss, Gerhardt's *Handbuch der Kinderkrankheiten*, Tübingen, 1878, vol. iv, part 1, p. 57.
  - <sup>14</sup> Vierordt, quoted in Schwalbe's *Die Morphologie der Missbildungen des Menschen und der Tiere*, Jena, 1910, part 3, p. 488.
  - <sup>15</sup> Hinze, *Inaug. Diss.*, Berlin, 1893.
  - <sup>16</sup> Rokitansky, *Handbuch der path. Anat.*, 1844.
  - <sup>17</sup> Langer, *Zeitschr. d. k. k. Gesell. d. Aertze*, Wien, 1857, p. 528.
  - <sup>18</sup> Pfeifer, *Virchow's Archiv f. path. Anat.*, Berlin, 1902, vol. clxvii, p. 210.
  - <sup>19</sup> Klotz, *Trans. Assoc. Amer. Physicians*, Philadelphia, 1907, vol. xxii, p. 213.
  - <sup>20</sup> Abelmann, *Ergeb. f. inn. Med. u. Khlkde.*, 1913, vol. xii, p. 143.
  - <sup>21</sup> Thomson and Drummond, *Edin. Hosp. Reports*, 1900, vol. vi, p. 62.
-



## Obituary.

---

### ON SERVICE.

CAPTAIN WILLIAM GARROW SHAND, M.B.GLASG.,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce the death of Captain W. G. Shand, R.A.M.C., which took place in France on 25th July from wounds received on the previous day. Captain Shand, who was 34 years of age, was the eldest son of Mrs. Shand, Caledonian Hotel, Lanark. He received his early education at Lanark Grammar School, proceeding to the University of Glasgow for the study of medicine. There his career as a student was exceptionally distinguished, and he took the degrees of M.B., Ch.B. with Commendation in the year 1903. After graduation he was for a time surgeon to the Anchor Line, and then became assistant to Dr. Young of Manchester, with whom he remained for about two years. He then acquired for himself a practice at Salford, where he soon established an excellent reputation, and where he held medical appointments in connection with important assurance associations. He volunteered over a year ago for service at the front, and was attached to the 20th Service Battalion of the Lancashire Fusiliers. When wounded, Captain Shand had been almost continuously on duty for three days and nights under heavy shell fire.

---

CAPTAIN ROBERT INGLIS BINNING, M.B.GLASG.,  
INDIAN MEDICAL SERVICE.

WE regret to announce that Captain R. I. Binning, I.M.S., has died of fever at Busra, Persian Gulf. Captain Binning, whose death took place on 16th August at the age of 31 years, was the son of Mr. and Mrs. John Binning, Kingsborough Gardens,

Glasgow. He received his school education at Glasgow Academy, and afterwards studied medicine at the University, where he took the degrees of M.B., Ch.B. in 1907. Thereafter he acted as dispensary resident in the Western Infirmary, Glasgow, and subsequently as resident in the Glasgow Royal Infirmary. Two years after taking his degree he passed into the Indian Medical Service, and at the outbreak of war was called up with the Meerut Division Ambulances. He was a year at the front in France, where his services were so distinguished as to earn for him mention in despatches. Returning with his division to the Tigris front at the end of last year, he was present at the unsuccessful actions for the relief of Kut.

---

---

ANDREW J. HALL, M.A., M.D. GLASG., D.P.H.,  
ROTHESAY.

DR. ANDREW J. HALL, who died in Rothesay somewhat suddenly on 24th July, had been in indifferent health since an attack of pneumonia in the previous winter. Dr. Hall, who was in his sixty-seventh year, was a graduate of Glasgow University, where he took the degrees of M.B., C.M. in 1875, and that of M.D. in 1878. He held his D.P.H. also from Glasgow. He started practice in Abbotsford Place, Glasgow, in 1876, and held there the post of medical officer of health for Govanhill. In 1881 he came to Rothesay, and during the last thirty-five years was engaged in general practice there. On the death of Dr. Maddever he succeeded to the office of medical officer of health for the Burgh of Rothesay and, later, for the District of Bute, holding both of these as part-time appointments. This part of his practice had a special interest for him, and he was exceedingly zealous in all work which had for its object the general health of the community. In this, by his kindly tact and straightforward conduct, he had the confidence of, and was able to rely on the support of his medical colleagues. For about twelve years Dr. Hall was a member of the Rothesay School Board, and thereafter he undertook the duties of school medical inspector for Bute, which office he held with much acceptance at the time of his death. Some years ago he was



mainly responsible for introducing a system of voluntary feeding of poor children by means of a soup kitchen, and this was carried out at school with much success. Another subject in which he interested himself was meteorology, and he did valuable work every year in tabulating and commenting on Bute meteorological records in a local scientific journal. Dr. Hall will be much missed by a wide circle of friends and patients and by his colleagues in Rothesay, who always found in him a wise coadjutor and a loyal comrade. Two of his sons are at present serving at the front, one as a doctor, and another is carrying on his practice in Rothesay.

---

ARTHUR GEOGHEGAN PAXTON, M.B.GLASG.,  
NEW ZEALAND.

WE regret to announce the death of Mr. A. G. Paxton, which took place in New Zealand on 27th May. Mr. Paxton was the youngest son of the late Thomas Paxton, collector of inland revenue, Aberdeen, and studied medicine at the Universities of Aberdeen and Glasgow, taking the degrees of M.B., Ch.B. at the latter University in 1905. He afterwards became attached as surgeon to the British and Burmese Steam Navigation Company, and in their employment rose to the position of Commodore-Surgeon, which he held until a short time before his death.

---

RICHARD GILBERTSON HERBERTSON, L.R.C.P.E., L.R.F.P.S.G.,  
BRADFORD.

WE regret to announce the death of Mr. R. G. Herbertson, which took place at his house in Bradford on 19th July. He was a student of the University of Glasgow and of the Sheffield Medical School, and took the qualifications of L.R.C.P.E. and L.R.F.P.S.G. in 1869. Settling soon afterwards in New Cumnock, he rapidly acquired the confidence of a large circle of patients, and was known and universally esteemed throughout the entire countryside. He was one of the Justices of the

Peace for Ayrshire, and until he removed to Bradford he was consulting physician to the Glenafton Sanatorium for Consumptives. About five years ago his son-in-law, Mr. Hanson, M.B.Glasg., who had been in partnership with him in his practice in New Cumnock, went to Bradford, where he was soon afterwards joined by Mr. Herbertson in a practice calling for the attention of more than one individual. The news of Mr. Herbertson's death will awaken in the district of New Cumnock many a memory of old friendships, and will be received with widespread regret.

---

DAVID SPENCE, M.B.GLASG.,  
ASHINGTON.

WE regret to announce the death of Mr. David Spence, which took place as the result of an attack of pneumonia at Ashington, Northumberland. The eldest son of Mr. and Mrs. J. D. Spence, of Cathcart, Mr. Spence studied medicine at the University of Glasgow, where he took the degrees of M.B., Ch.B. in 1902. After graduation he was for a time resident medical officer in Harton Hospital, South Shields. He then settled in practice in Ashington, where his premature death occurred on 25th July.

---



## CURRENT TOPICS.

---

UNIVERSITY OF GLASGOW: RETURN OF ALUMNI IN THE FORCES.—Principal Sir Donald MacAlister has obtained the following returns from the adjutant of the Officers' Training Corps of Glasgow University. They give the figures up to the end of the summer term, 1916:—

- |   |       |
|---|-------|
| 1. Number of alumni (graduates and students) serving in His Majesty's Forces since the outbreak of the war, . . . . . | 2,801 |
| 2. Number of (1) who are ex-cadets, O.T.C., . . . .   | 1,316 |
| 3. Number of (1) who have received commissions, . .   | 2,241 |
| 4. Number who have received distinctions, decorations, &c. (V.C., C.B., D.S.O., &c.), . . . .                         | 66    |
| 5. Number mentioned in despatches, . . . . .  | 108   |
| 6. Number of casualties—Killed 196, wounded, 214, missing 15.   |       |
| 7. Number of members of University staff serving with His Majesty's Forces, . . . . .                                 | 54    |

APPOINTMENTS.—The following appointments have recently been made:—

T. M'Geoch, M.D.Glasg. (M.B., 1886), to be Certifying Factory Surgeon for the Girvan District Cottage Hospital.

*Royal Navy* (19th July): Temporary Surgeons W. B. Cunningham, M.B., Ch.B.Glasg. (1909), to *Devonshire*; R. Tennent, M.B., Ch.B.Glasg. (1914), to *Victory*.

*24th July*: Temporary Surgeon W. G. Clark, M.B., Ch.B. Glasg. (1910), to *Vernon*.

*7th August*: Temporary Surgeon D. P. Brown, M.B., Ch.B. Glasg. (1913), to *Vivid*.

*Royal Army Medical Corps* (19th July): To be temporary Captains—Temporary Lieutenants C. Averill, M.B., Ch.B.Glasg.

(1911); D. C. M'Ardle, M.B., Ch.B.Glasg. (1908); A. G. W. Thomson, M.B., Ch.B.Glasg. (1910); J. P. Duncan, M.B., Ch.B.Glasg. (1900), B.Sc.; W. G. Shand, M.B., Ch.B.Glasg. (1903) [died of wounds, 25th July]; T. M'Cosh, M.B., Ch.B.Glasg. (1905); D. Meek, M.B., Ch.B.Glasg. (1912); D. Duncan, M.B., Ch.B.Glasg. (1907); W. Clow, M.B., C.M.Glasg. (1895). To be temporary Lieutenants—D. T. C. Frew, M.B., Ch.B.Glasg. (1911); W. T. Currie, M.B., Ch.B.Glasg. (1914); J. D. Macfie, M.B., Ch.B.Glasg. (1905); J. M. Kelly, M.D.Glasg. (M.B., 1903); D. R. Adams, M.D.Glasg. (M.B., 1910).

*29th July:* To be temporary Captain—Temporary Lieutenant R. N. Thomson, M.B., Ch.B.Glasg. (1914).

*2nd August:* To be temporary Captain—Temporary Lieutenant D. T. C. Frew, M.B., Ch.B.Glasg. (1911). To be temporary Lieutenants—J. A. Aitken, M.B., Ch.B.Glasg. (1912); D. K. Henderson, M.D.Ed. (Glasgow); J. Butler, M.B., C.M.Glasg. (1896); W. R. Wylie, M.B., Ch.B.Glasg. (1901).

*7th August:* To be temporary Captains—Temporary Lieutenants A. F. Bell, M.B., Ch.B.Glasg. (1905); P. L. L. Craig, M.B., Ch.B.Glasg. (1896); T. Marlin, M.D.Glasg. (M.B., 1909); A. Robb-Smith, M.B., C.M.Glasg. (1892); R. W. Sutherland, M.B., Ch.B.Glasg. (1909); A. Climie, M.B., Ch.B.Glasg. (1914); H. W. Dyke, M.B., Ch.B.Glasg. (1905); W. H. M'Walter, M.B., C.M.Glasg. (1892); T. D. Moffat, M.B., C.M.Glasg. (1890); A. Peden, M.B., Ch.B.Glasg. (1912); D. Renton, M.B., Ch.B.Glasg. (1907); J. R. M'Vail, M.B., Ch.B.Glasg. (1904); C. L. Miller, M.B., Ch.B.Glasg. (1910); A. Patrick, M.D.Glasg. (M.B., 1908); D. Glen, M.B., C.M.Glasg. (1894); R. Millar, M.B., Ch.B.Glasg. (1899); J. R. Bryce, M.D.Glasg. (M.B., 1889); P. J. Kelly, M.B., Ch.B.Glasg. (1906). To be temporary Lieutenant—E. D. S. Heyliger, M.B., C.M.Glasg. (1892).

*14th August:* To be temporary Lieutenant—E. C. White, M.B., Ch.B.Glasg. (1912). Supplementary to regular units or corps: to be Lieutenant—Cadet S. J. Henderson, M.B., Ch.B.Glasg. (1916), from Glasgow University O.T.C.

*R.A.M.C., Territorial Force (1st August):* Lowland Casualty Clearing Station—D. Cameron, M.B., Ch.B.Glasg. (1916), and J. Chalmers, M.B., Ch.B.Glasg. (1916), to be Lieutenants.

*11th August:* Lowland Casualty Clearing Station—E. M. Dunlop, M.B., Ch.B.Glasg. (1916), to be Lieutenant.



MENTIONED IN DESPATCHES.—In Sir George Smith's Nyasaland despatch, which appeared in the *London Gazette* of 3rd August, occurs the name of Dr. (temporary Captain) N. MacL. Leys, in charge of the Karonga Hospital. Dr. Leys is a graduate of Glasgow University, where he took the degrees of M.B., Ch.B. in 1900. He is also a D.P.H. of the Royal Colleges of London, and before the war he had been acting medical officer of health for Mombasa, and medical officer of the British Central African Protectorate.

GLASGOW MEDICAL CASUALTIES.—In the past month there have been a number of casualties among graduates and medical students of Glasgow University, most of them connected with the offensive on the Western front. Captain L. D. Shaw, M.B., Ch.B. Glasg. (1904), R.A.M.C., who has been wounded for the second time, was in his student days a noted athlete, playing forward for the University fifteen from 1899 to 1904, twice winning putting the weight and once throwing the hammer in the Inter-University sports, and in 1904 representing Scotland against Ireland in putting the weight. He played forward for London Scottish in season 1904-05. Before the war he was in practice in Tientsin, North China.

Captain W. J. Henry, R.A.M.C., attached Wiltshires, is a graduate of Glasgow University, where he took the degrees of M.B., Ch.B. in 1913. He was reported wounded on 28th July.

Lieutenant R. S. Gibson, M.B., Ch.B. (1915), R.A.M.C., attached Royal Garrison Artillery, and reported wounded on 7th August, is a son of Professor Gibson of Glasgow University. A brilliant student of the University, he was equally distinguished in his undergraduate days in its social and political life.

Lieutenant W. E. H. Beard, R.A.M.C., attached Manchester Regiment, and reported wounded on 8th August, studied at Glasgow University, where he took the degrees of M.B., Ch.B. in 1911. Before the war he was in practice in Jamaica.

Captain J. Ferguson, R.A.M.C., reported wounded on 9th August, is a son of Mr. John Ferguson, Claremont, Alloa. He took the degrees of M.B., Ch.B. of Glasgow University in 1907, and was gazetted temporary Captain in 1915.

Captain E. D. Gairdner, M.B. Glasg., R.A.M.C. (T.F.), who had been previously wounded, is now (16th August) reported seriously

wounded for the second time. Reference has already been made in previous issues of the *Journal* to Captain Gairdner's distinguished services at the Dardanelles, which won for him the decorations of the Croix de Guerre and the D.S.O.

Second Lieutenant C. N. Gordon, wounded in action on 15th July, is a third-year medical student at Glasgow University, where he was a corporal in the O.T.C. He was gazetted Second Lieutenant in the Seaforths in February, 1915.

Captain Ross Kennedy, Holmston Road, Ayr, received towards the end of July official intimation of the death of his eldest son, Second Lieutenant Robert Kennedy, Royal Scots Fusiliers. Lieutenant Kennedy had completed the first year of his medical course at Glasgow University when he received his commission in June last year. He was 20 years of age.

Mr. John Morton, surgeon to the Western Infirmary, has received intimation that his son, Second Lieutenant J. W. Morton, Glasgow Highlanders, has been wounded. Lieutenant Morton, who was a medical student of Glasgow University, received his commission in February, 1916, and prior to that he had served for several months with the R.A.M.C. in Gallipoli.

Lieutenant G. H. Pagan, Black Watch, was killed in action on 31st July. Mr. Pagan, who was 23 years of age, and a most popular officer, was the eldest son of Mr. R. Osborne Pagan, W.S., Cupar, and a grandson of the late Professor John Young, M.D., Glasgow University.

Second Lieutenant Henderson Carslaw, B.Sc.Glasg., has been severely wounded in the shoulder, but is doing well. He is a son of the late Dr. J. H. Carslaw, Glasgow, and obtained his commission in April, 1915. He went to the Dardanelles in the following July, and has since been on service in Egypt.

In the list of officers taken prisoners at Kut-el-Amara occur the names of Major S. Anderson, I.M.S., M.B., C.M.Glasg. (1894), civil surgeon to the Province of Behar, and author of numerous contributions to medical literature on subjects connected with tropical medicine, and of Major W. M'M. Pearson, I.M.S., M.B., C.M.Glasg. (1897).

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At a meeting of the College held on 20th July, the following gentlemen,



having passed the requisite examinations between 3rd and 5th July, 1916, were admitted Fellows:—Ivan Wanless Dickson, M.B.Toronto Univ., M.C.P. & S.Ontario, M.R.C.S.Eng., L.R.C.P. Lond.; George Hamilton Ross Hamilton, M.B.Toronto Univ., M.C.P. & S.Ontario; William Howard Thomas, M.B., Bac. Surg. Univ. New Zealand; Henry Richard Hodgkinson, M.B., M.S. Univ. Sydney; Wesley John Jenner, L.R.C.S.E. (Triple Qualification); Bireswar Mitra, L.M.S.Calcutta Univ., M.R.C.S.Eng., L.R.C.P.Lond.; Charles William Sharp, L.R.C.S.E. (Triple Qualification).

THE HOFFMANN-LA ROCHE CHEMICAL WORKS, LIMITED.—We have received from the secretary of the above Company a statement that in view of a notice appearing in the London Chamber of Commerce Journal of October, 1915, warning commercial houses against trading with Messrs. F. Hoffmann-La Roche & Co., of Basle, Switzerland, the Company at once took steps to correct what appeared to be a misapprehension, and submitted to the Foreign Trade Department of the Foreign Office proofs of their Swiss nationality, with the result that the warning notice has been withdrawn, and that the Department raises no objection to the resumption of trade with the firm. Copies of the documents in question accompany the secretary's statement, and from these it is evident that the firm, so favourably known for the high quality of its products, is not of enemy nationality, but is unquestionably Swiss.

CHILD WELFARE EXHIBITION.—The subject of child welfare is one which in the present circumstances of the nation must increasingly engross the attention of all who are anxious to repair the ravages of war. The waste of infant life had, indeed, aroused the concern of the thoughtful before war was declared, and tentative endeavours had been made to stem it; but beyond the general measures of improved sanitation which, while they have lowered mortality as a whole, have been less successful with infant mortality, nothing very definite had been done up to the passing of the new Act. The realisation of the enormous loss of young life which the war would bring with it was somewhat tardy; "over before Christmas"

was seriously said in 1914, and again last year. It is still said to-day, and possibly with somewhat more plausibility, though the optimists who repeat the phrase would seem to forget that wars are often prolonged long after a decision has been reached in the military sense. Millions are not exterminated in a few months.

But however each of us may differ in his estimation of the remaining duration of the war, it has lasted long enough to force the most thoughtless to recognise that the young manhood of Britain has already been gravely depleted, and that it must suffer still more grievous loss before the end. To the humanitarian motive for the care of the child and the prevention of infant mortality there is added the consideration that only by the preservation of a larger percentage of infants born alive can the loss be in any degree compensated. Under this stimulus fresh schemes have taken shape, and one of the most recent of these is the Exhibition of Maternity and Child Welfare Work, Food Values, Thrift, Home Nursing, &c., which has been prepared by a number of Scottish women belonging to the Scottish branches of the National Union of Women Workers. The object is to spread in the smaller towns and villages a knowledge of the more striking advances that have been made in recent years in dealing with problems of infancy and childhood. In place of the Marchioness of Aberdeen and Temair, at present in the United States, Mrs. Leslie Mackenzie, Edinburgh, is the acting convener of the committee promoting the exhibition. Other members of the committee are Mrs. Sommerville and Mrs. Hannay, Edinburgh; Mrs. Greenlees, Mrs. Forrest, and Mrs. Mackenzie Anderson, Glasgow; Mrs. Troup and Mrs. Gibson, Dundee and Broughty Ferry; Miss Bentinck Smith, D.Litt., and Mrs. Sloan, St. Andrews; Mrs. Forbes of Rothiemay, Mrs. Dingwall Fordyce of Brucklay, Mrs. Gordon Duff of Drummur, Lady Adam Smith and Mrs. George Esslemont, Aberdeen. Mrs. Ogilvie Gordon, D.Sc., Ph.D., Aberdeen, is the Hon. Secretary of the Exhibition Committee.

The first county visited was Banffshire, and the opening of the exhibition took place in the Longmore Hall, Keith, on Monday, 7th August. Dr. Leslie Mackenzie, medical member of the Local Government Board of Scotland, gave an address



at the opening ceremony. He said if there was one thing no one doubted it was that while the fathers were dying for us abroad we must keep their children from dying at home. It was the passionate sense of this obligation that had led the National Union of Women Workers to create that exhibition. The local authority had now the power to make arrangements for attending to the health of expectant mothers, nursing mothers, and children up to the age of 5. In the memorandum issued by the Local Government Board was an outline of the schemes that local authorities were now in a position to frame. It was open to them to arrange maternity centres where expectant mothers and nursing mothers might come for medical advice and treatment, to establish a system of home visitation by health visitors or doctors, to arrange that skilled and prompt attention should be ensured to every mother requiring it, that hospital accommodation should be available for dangerous or difficult cases, that schools for mothers and young women might be established in co-operation with the school boards or secondary education committees. The local authority might also establish consultation centres where children up to the age of 5 might be brought for medical advice and treatment, and from which they might be visited. They might provide or arrange for hospital accommodation for sick children when satisfactory treatment was impossible at home, for convalescent homes for children in impaired health, for day nurseries or nursery schools wherever these were practicable, and that meant in almost every village. They were now, by statute, in a position to prepare such a record of each child as would enable the local authority, through its medical officer of health, to furnish every child of school age with a certified health schedule for presentation on admission to school. Briefly, the local authority was now able to apply public funds in the provision of organised care for the mother throughout her periods of expectancy and nursing, and of the child until it passed from the home to the school. In some of these services the local authority would receive Government grant to the extent of half of the outlays. For some of the services—for instance, treatment in hospitals—no Government grant would be given, but the local authority had the power to proceed. The grants would be administered by the Local Government

Board for Scotland under the regulations laid down by the Lords Commissioners of His Majesty's Treasury. There was, however, one very important point. The town council or district committee might exercise their powers through a committee, and this committee must contain women. It needed no saying that the care of children was a woman's job. But, apart from such a committee, the local authority had complete freedom in utilising the services of all voluntary agencies and organisations that might exist or spring up in their district. The new Act really provided machinery for bringing together all the organisations that operate in the field of child welfare and maternity service.

After two days in Keith the exhibition proceeded to Rothiemay, where it was displayed for one day in the Parish School, then Aberchirder, Cornhill, Dufftown, Aberlour, and the active centres on the Banffshire coast were visited in turn. Thereafter other counties in the North of Scotland will be traversed, and the exhibition will visit in turn the central and southern districts.

Among the special features of the exhibition are a number of models showing the methods followed in mothers' and babies' clubs, day nurseries, play gardens, clinics, and various organisations for the guidance of mothers, picture panels of welfare work from the United States, and home fittings of all kinds for the assistance and convenience of mothers. Examples of nourishing diet suitable for different ages are presented alongside of unsuitable diet; similarly, suitable clothes and unsuitable; well ventilated and orderly rooms, and ill-ventilated and disorderly.

Mrs. Russ-Barker, an Associate of the Royal Sanitary Institute of London, and Miss Grace Stewart, who holds a diploma in domestic science from the Scotch Education Department, accompany the exhibition on its journeys, and give frequent demonstrations and talks to women on subjects of everyday use in the household.

It will be seen that an exhibition of this nature, traversing the whole of Scotland, represents an endeavour of almost national importance towards enlightenment on the best means of dealing with the problems of the rearing of healthy children, and it is to be expected that much good may result from the attempt. It is, however, sufficiently evident that the best



instruction that can be given to individual mothers must fail of its full effect if they are not in a position to follow its precepts, and in the great centres of population that is unfortunately the case. Maternal care may save its thousands, but bad housing will continue to slay its tens of thousands, and until the housing problem is satisfactorily dealt with by an awakened civic conscience, such exhibitions must be productive of only a fraction of the good they might otherwise attain. We may nevertheless be grateful for the half, as a step towards the whole for which we hope.

BEQUESTS TO MEDICAL CHARITIES.—By the will of the late Mrs. Lilius Morison Buchan or Craig, wife of James Simpson Craig, merchant in Glasgow, the sum of £31,500 has been bequeathed to various institutions and benevolent institutions in Glasgow, the bequests to become operative on the death of her husband. The following is a list of the bequests to medical charities:—The Glasgow Royal Cancer Hospital, £2,000; the Royal Hospital for Sick Children, Glasgow, £1,000; the Western Infirmary, Glasgow, to endow a bed, £1,000; the Glasgow and West of Scotland Convalescent Seaside Homes (Dunoon), the Association for the Relief of Incurables in Glasgow and the West of Scotland, Kilmun Convalescent Seaside Homes, Glasgow Medical Missionary Society, Glasgow Royal Infirmary, the Royal Samaritan Hospital for Women (Glasgow), the Victoria Infirmary (Glasgow)—to each £500; the Samaritan Society in connection with the Western Infirmary, Glasgow, £250.

By the will of the late Miss Mary Hamilton, 4 Marlborough Terrace, Kelvinside, Glasgow, disposing of the sum of £165,000 for public and charitable purposes, the following sums have been allocated to medical institutions:—Western Infirmary of Glasgow, for "Hamilton Ward," £30,000; for ordinary purposes, £7,500; for Samaritan Society, £1,000—in all, £38,500. Glasgow Royal Infirmary, for ordinary purposes, £10,000; for Dorcas Society, £1,000; for Glasgow Ophthalmic Institution, £1,000—in all, £12,000. Victoria Infirmary of Glasgow, £7,500; Glasgow Hospital for Sick Children, £7,500; Association for Relief of Incurables for Glasgow and the West of Scotland, particularly for relief of paralytics, £7,500; Colquhoun Trust for Incurables, particularly for relief of paralytics, £2,500; the Glasgow

Hospital for Diseases of the Ear, Nose, and Throat, £1,000; Glasgow Eye Infirmary, £1,000; Glasgow Blind Asylum, £1,000; Deaf and Dumb Institution, £2,000; Glasgow and West of Scotland Convalescent Seaside Homes, Dunoon, £2,500; Glasgow Convalescent Homes, Lenzie, £2,000; the M'Alpin Nursing Home, £1,000; the Higginbotham Sick Poor Nursing Association, £1,000; Royal Infirmary, Edinburgh, £7,500; the Royal Edinburgh Hospital for Incurables, particularly for relief of paralytics, £5,000; the Royal Society for Home Relief to Incurables, Edinburgh, £1,000; Sibbald Pensions for Relief of Incurables, £1,000.

FRENCH HONOUR FOR SECRETARY OF SCOTTISH WOMEN'S HOSPITALS.—The French Government has recently honoured Miss Kathleen Burke, of the Scottish Women's Hospitals, by awarding to her the decoration of the "Golden Palms" and naming her *Officier de l'Instruction Publique et Beaux Arts*. This is one of the highest honours France can bestow on those who have distinguished themselves in art, science, or literature. Called by France "the knight of tenderness and pity throughout the world," Miss Burke has used her gift of eloquence to plead the cause of the French and Serbian wounded in Britain, and more recently in America and Canada.

It is hardly possible to conceive a more striking testimony to the work which the Scottish Women's Hospitals are so devotedly performing than this tribute of France to them in the person of Miss Burke. True, the testimony is personal to herself as "the knight of tenderness and pity"—and how the phrase in an official document illuminates the spiritual insight of France—but the work of tenderness and pity of which she is the apostle is the daily work of the staffs of the hospitals. However broad-minded we may have felt ourselves in our estimate of woman's fitness for the medical profession, however gallantly we may have recognised—and many of us have felt at the back of our minds that we were really making a rather gallant concession—that woman's intellect was nearly as capable as our own of grasping the profundities of physiology and therapeutics, and that in the ordinary affairs of practice she might be able to meet us on almost equal terms, there were few of us without a lurking fear that in the organisation and daily work of



hospitals dealing with the worst results of the shock of war there might be some breakdown, some flinching in emergency, some not unnatural weakness before the heaped-up horrors of the task. Yet the work has gone on, and the emergencies have been met, not for a few weeks or months only, but for more than two years, and there is no sign of failure. Whether they have had to face typhus or famine, to make a sanitary hospital out of the dirt and cesspools of a Balkan farmhouse, or to deal with the appalling wounds of modern shell fire, these women have been equal to the strain; they have found in themselves a strength to triumph over their own delicacy of body and of soul, and to bring solace and relief wherever they have stepped. We might have known it, we who have seen at the bedside so many wives and mothers strong for their husbands or their sons, but we thought in these cases it was personal love that cast out fear; we did not realise the breadth as we realised the depth of the emotion. All the world recognises it now, and France, as ever at its head, expresses first among nations the universal gratitude, the universal admiration.

Universal as is the feeling, there is, notwithstanding, in the manner of its expression a difference between France and England—we trust that when anything less than unqualified approval is implied, the term England may be pardoned to a Scot—which is somewhat amusingly characteristic of the difference in their national psychologies. France, always logical, pays to the particular woman, or class of women it singles out for special services, a due and generous meed of honour and recognition; England, incurably sentimental, declares that the work of all women has been of such a nature that universal suffrage is the necessary consequence. Even the immovable Mr. Asquith would seem to be rocking on his pedestal. And yet the *non-sequitur* is sufficiently obvious. It was surely to be expected of our women that they should share in the national effort; they would have been less than women had they not done so. That they did so may very well destroy in a sentimental impulse the sentimental arguments against the suffrage; it does not alter by one iota, for example, the probability that the giving of the vote will double the power of Roman Catholicism in this country. To those who think that undesirable the objection remains valid, in spite of the stream

of heady sentiment by which objectors are in danger of being submerged. We can never be sufficiently grateful to the women of Britain, and to those of them in particular who in the Scottish Women's Hospitals have shown qualities of fortitude and of endurance, of organisation and of efficiency almost beyond what could have been hoped of woman's strength; but let us be grateful, not on our heads but on our knees.

EDUCATIVE CONVALESCENCE.—An interesting experiment, which remains experimental only because funds are lacking for its application on a larger scale, has recently been made in the education of crippled and convalescent sailors and soldiers to remunerative occupations and trades. There exists at Chailey, Sussex, under the patronage of the Princess Louise and many of the leaders of the aristocracy, the church, and the medical profession, a home and school for crippled children known as the Heritage Craft Schools, Chailey. There, since its foundation in 1903, such children have received surgical and medical attention, have been given the best of teaching, of craft work, and of industrial training in the most practical way, have learned domestic science unconsciously about the house, have been taught in the workshops the designing, making, and mending of furniture and the provision of hospital appliances, have learned fine needlework, washing, ironing, and starching, and so on. Groups of boys are taken under his care by the farmer, who teaches them the management of live stock; other groups, in the garden, are taught to raise vegetables and farm supplies for the Schools; yet others learn typewriting and secretarial work; and with all this assiduity of labour the happiness of each child is steadily cared for, and originality of design rather than mechanical reproduction is constantly encouraged. The Schools have been so successful that, while at first employers of labour had to be cajoled into giving the children a chance, the children are now engaged at the bench by heads of firms and bespoke sometimes months before they are due to leave, as most of them do at the age of sixteen.

It occurred to the Council of the Schools at the beginning of the war that it would be desirable to admit wounded and crippled men to such surroundings, where orthopædic treatment can be carried on along with training in a special craft or



occupation. In the ordinary hospital, although deformities may be corrected and artificial limbs supplied at a later date, there is nothing for the wounded man to do. Listlessness and the feeling of hopelessness that attends the cripple retard his convalescence. He has nothing to look forward to but his pension, and he is apt to think that he fills no useful place in the world. At Chailey all this is changed. To each crippled soldier is told off a crippled child suffering from the same defect, and capable through the training he has undergone of a useful occupation. The child becomes the model of the man, who learns from him freedom in the use of crutches, and acquires by imitation proficiency in craft and even games far more rapidly than if he were taught by the best of unmaimed teachers. Idleness gives place to occupation, listlessness to cheerfulness, in this combination of craft school and military hospital, and as one soldier put it—"This is a place where life can be spelt with a capital 'L' for the most of us, and every day I am learning something fresh." The scheme of "educative convalescence" carried on in the Princess Louise Military Wards attached to the Schools proved in the first year signally successful, and nothing is wanted for its permanent usefulness but adequate funds to provide and equip sufficient huts for the men who will return from the war crippled and disabled. A sum of £3,000 is needed for this object, and after their first purpose has been served the huts will not be dismantled, but will remain at Chailey for the benefit of larger numbers of crippled children than the Schools can at present accommodate. Subscriptions will be gratefully received and acknowledged by H.R.H. the Princess Louise, the Bishop of London, the Lady Katherine Somerset, Bishop G. F. Browne, D.D., and by Miss A. C. Rennie or Mrs. C. W. Kimmins, Old Heritage, Chailey, Sussex.

SOCIÉTÉ NATIONALE DE CHIRURGIE DE PARIS.—We are requested to state that a generous donor, who desires to remain anonymous, has offered to the Société Nationale de Chirurgie de Paris a prize of 50,000 fr. (£2,000) to be handed over to the maker of the mechanical apparatus best supplying the place of the hand. All competitors must belong to allied or neutral nations. They are to present to the Society mutilated men

who have been using their apparatus for at least six months. The Society will make experimental trial of each apparatus on mutilated men for such length of time as it thinks fit, and the successful apparatus will remain the property of its inventor. The competition will be closed two years after the end of the war. The Société de Chirurgie has elected as adjudicators a committee consisting of MM. Faure, Kirmisson, Quenu, Rieffel, and Rochard, who hereby make public intimation of the conditions of the competition as stated by the donor, and request intending competitors to send their memoir and apparatus to M. le Secrétaire Général de la Société Nationale de Chirurgie, à Paris, 12, rue de la Seine.

VISUAL STANDARD IN THE EXAMINATION OF RECRUITS.—It is a matter of common knowledge, or at least common rumour, that the sight tests used in the medical examination of recruits for the British Army are fixed at far too high a standard, with the necessary consequence that many men otherwise perfectly eligible, and whose sight does not trouble them in civil employment, are lost to the Army for this reason alone. We are indebted to a paper by Messrs. J. V. Paterson, F.R.C.S.E., and H. M. Traquair, F.R.C.S.E., in a recent number of the *Lancet*, for an accurate statement of the differences between the British standard and those in use in Continental armies. The present high standard was fixed, it would appear, because most of our previous wars occurred in foreign countries far from the base of the Army. Spectacles could not readily be supplied and were therefore prohibited, while as the numbers needed were comparatively small the sight test conducted without glasses secured a sufficiency of men. At the outset of the present war the old standard was in force. It called for a visual acuity of  $\frac{6}{24}$  with each eye, or  $\frac{6}{6}$  with one eye and  $\frac{6}{36}$  with the other. In September of last year it was altered to  $\frac{6}{24}$  in each eye or  $\frac{6}{24}$  in the right eye with  $\frac{6}{60}$  in the left for general service, while  $\frac{6}{60}$  in the right with  $\frac{6}{24}$  in the left was accepted for the auxiliary services, the test being still without glasses. The use of correcting glasses was permitted in home service and garrison services at home and abroad, and steps were taken to supply correcting lenses to men who were found visually defective after joining the Army.



The standards of the great Continental armies, all very similar, show a marked contrast even to the improved version of our own. In every case it is vision with glasses (corrected vision) which determines acceptance or rejection. In France, Germany, Italy, and Austria men with myopia up to six or seven diopters are accepted provided the vision with glasses reaches the required standard. The uncorrected vision of such a man will not be more than  $\frac{3}{60}$  without glasses, while in the British Army  $\frac{6}{24}$  in each eye, or  $\frac{6}{24}$  in the right with  $\frac{6}{60}$  in the left, is required for general service. This corresponds to at most 2·5 to 3·5 D. That is, all myopes with as low a defect as 3·5 D in the worse eye are excluded from combatant service in our Army, though not in the Continental armies mentioned. Men with hypermetropia or astigmatism are also excluded from general service unless they can pass the test without glasses.

The authors attribute the following defects to the British system:—(1) That the use of glasses is prohibited during the test; (2) that an arbitrary standard of vision is insisted on for the worse eye when the sight of the better eye is good; (3) that the test does not ascertain whether the defect is due to a corrigible error of refraction or to organic disease of the eye. With regard to (2), the German regulation for combatants is that they must have corrected vision of at least  $\frac{6}{12}$ ; in the other the *corrected* vision may be minimal. With regard to the statement in the House of Commons on the 16th March that the British visual standard was fixed by a mixed committee of military officers and ophthalmic experts, the authors point out that the Ophthalmological Society of the United Kingdom has not been consulted since 1906. It is obvious, as they indicate, that such a sight test as ours is fixed at far too high a standard, loses to the Army large numbers of efficient men, and, in the present need, calls urgently for revision.

RALSTON HOSPITAL FOR PARALYSED SOLDIERS.—The Scottish Red Cross Hospital at Ralston for the treatment of paralysed soldiers was opened on 2nd August by the Duchess of Montrose. Its existence is due to the generosity of Sir Charles Cayzer, Bart., who has granted Ralston House to the Red Cross for ten years, and fully equipped it for the purpose in view. Through his munificence, and through the efforts of the Scottish Branch

of the Red Cross Society, Ralston House has now been equipped in such a manner that it provides a home for paralysed Scottish soldiers similar to that already provided for English soldiers at the Star and Garter Hotel, Richmond. The cost of maintenance will fall upon the funds of the Branch, no capitation grant being paid out of Government resources for the treatment of these cases.

Ralston House, which was built about fifty years ago, stands in pleasant rural surroundings a mile and a half from Paisley. Little adaptation has been necessary to fit the building for its new purpose, the main internal alteration being the provision of a lift by means of which beds may be moved from one floor to another. The wards are bright and cheerful in appearance, all of them being well lit and airy. The building will accommodate about seventy-five patients, and at present it is intended that about half of these shall be convalescent wounded men whose presence is calculated to have a cheering influence upon the more unfortunate paralytics.

The opening ceremony took place in front of the mansion in presence of the patients, whose beds had been wheeled out from the wards to the lawn. Sir George T. Beatson, K.C.B., chairman of the Scottish Branch of the Red Cross, presided, and among the large company of ladies and gentlemen were Lady Helen Graham (daughter of the Duchess of Montrose), Sir Charles Cayzer, Bart., and Lady Cayzer; Surgeon-General Culling, D.D.M.S. for Scotland; Sir Thomas Glen-Coats, Bart.; Sir John Ure Primrose, Bart., and Lady Primrose; Sir Hector Cameron, Sir David M'Vail, Lady Mason, Lady Bine Renshaw, Lady Scott, Mr. John Reid, and Mr. Baird Smith.

The chairman said that next to doing everything possible to win the war, the most clamant call upon the nation was the care and succour of those soldiers and sailors who were sufferers by having fought for the safety of the Empire and on behalf of humanity. The human wreckage of war had presented itself in many painful shapes—the blind, the maimed, the crippled—but perhaps the class that appealed most to us were those who had been laid aside by paralysis. The Scottish Branch of the Red Cross had found that whenever a claim was made upon them some generous donor had come forward to help them to meet it. On the present occasion Sir Charles Cayzer, one of



Glasgow's leading business men, had enabled them to provide for the paralysed soldiers by placing at their disposal that commodious and beautiful building.

The Duchess of Montrose, in declaring the hospital open, recalled that formerly paralysed cases, irrespective of nationality, were treated at the Star and Garter Home at Richmond. While visiting that home in March last Her Grace was told by Sir Frederick Treves that the Scottish patients longed to be back in Scotland. It was natural that these men, most of them bed-ridden, should wish to be brought where they would have attention from Scottish nurses, hear the Scottish accent spoken, and be nearer to relatives and friends who could visit them. She made known to Sir Charles Cayzer the great need for such a home in Scotland, and he at once generously offered Ralston House for the treatment of Scottish paralysed and disabled men. He had renovated and equipped it with all that generosity and forethought could provide for the comfort and care of those who would be patients. Of the sad results of this terrible war there was none more pathetic than the soldiers who by reason of their wounds were paralysed and left helpless in the very flower of their youth. The Scottish Red Cross Executive had undertaken the responsibility of the maintenance of the hospital, as they felt confident that they could rely on the generosity of the Scottish people to provide the funds for the purpose. It was hoped that the hospital would serve also as an auxiliary to Bellahouston Hospital, from which wounded men could be sent to enjoy all the advantages of the grounds surrounding the home, and where their presence would help to cheer the patients who were paralysed. At this time of intense fighting in the theatre of war we looked forward to the assured victory which was coming in the future as the result of the splendid valour of our troops, but mingled with our admiration for them was the sorrowful thought of the great price we were paying for victory in the loss and the crippling of so many of the young, the best and the bravest in our land.

Surgeon-General Culling, on behalf of the War Office, accepted the hospital, stating that we could not do too much for those men who had suffered by fighting for their country.

The chairman, in name of the Scottish Red Cross, said he desired publicly to thank Sir Charles Cayzer for his handsome

gift. From the beginning of the undertaking Sir Charles and his son had spared no effort to make the home the very best for the purpose in view.

Sir Charles Cayzer said he required no thanks. When we reflected on what the soldiers and sailors were doing for us, and that we were safe at home, the least we could do was to provide for those who were suffering for their country's sake.

After a vote of thanks had been awarded to the Duchess of Montrose on the call of Sir Hector Cameron, a touching incident was witnessed at the bedside of one of the paralysed patients, the Distinguished Conduct Medal being presented to Private Anderson MacLelland, of Lovat's Scouts, who was wounded in the spine at Suyla Bay while carrying a wounded comrade to safety under a hail of shell-fire. The medal was pinned on the breast of the soldier by Sir Thomas Glen-Coats, who congratulated him upon his bravery. Private MacLelland is 37 years of age, and was a crofter and ghillie at Morar, Inverness-shire.

SCOTTISH HOSPITAL FOR LIMBLESS SAILORS AND SOLDIERS.—Contributions continue to be received in aid of the funds of this hospital. Among the noteworthy contributions of the past month have been £250 from Messrs. R. & J. Dick, Ltd.; £100 from Miss Louisa Murray, Anstruther; £250 from Sir William Younger, Bart., and Lady Younger; £250 from Messrs. Redpath, Brown & Co., Edinburgh; £100 from Mr. Charles Hope, Cowdenknowes, Earlston, from Messrs. Penman & Co., Ltd., and from Messrs. Hurst, Nelson & Co., Ltd.; £105 from Messrs. Thos. M'Laren & Co.; £100 from Mr. Humphry Crum Ewing, Strathleven, and from Mrs. Walker, Limefield, West Calder; £1,000, being a proportion of the estate left by Mr. Peter Coats to charitable institutions; £100 from Messrs. Mitchell Bros., Ltd., St. Vincent Street; and £250 from the Reed and Prince Manufacturing Co., Worcester, Mass. From garden fêtes and similar entertainments the following sums have been contributed:—From a garden fête at Gourock House by Mrs. Darroch, £70; from a garden fête organised by Mrs. Osborne at Kippendavie House, Dunblane, £500; from a putting competition at Prestwick, £33; from a sale and garden entertainment promoted by Mrs. H. Lumsden and Mrs. A. Gilmour at Irvine, £407; from a fête and ladies' day held by the Charleston



Bowling Club, Paisley, £320, to be divided between the hospital and the Red Cross Fund; from matinees given in Edinburgh and Glasgow by a troupe of French artistes, £100; and from an open-air concert held at Milton Lockhart, £82. The total amount of contributions received up to 15th August was £115,144, 4s. 11d.

SCOTTISH HOSTEL FOR BLINDED SOLDIERS AND SAILORS.—Scottish soldiers and sailors who have lost their sight in the war or have had their sight seriously injured are invited to make application for admittance to the Hostel, Newington House, Edinburgh, where they will receive a thorough training to enable them to resume ordinary life. They will be taught to read Braille, and made familiar with the newspapers, magazines, and books now published in Braille type; they will be taught typewriting and instructed in some trade. After the training is completed assistance will be given to them to establish the industry they have learned in whatever part of Scotland they wish to live. No charge is made for residence or training at Newington House, and information will be furnished by the Superintendent, Newington House, Edinburgh.

GLASGOW DENTAL HOSPITAL.—The annual meeting of the Glasgow Dental Hospital was held in the Merchants' House, Glasgow, on 18th July, Mr. James Macfarlane, vice-president, in the chair. Mr. D. M. Alexander, secretary, submitted the thirty-first annual report. It stated that the number of patients treated during 1915 was 15,114, as compared with 17,260 during 1914, in which year the figures reached their highest point in the history of the hospital. The number of conservative operations during 1915 was 7,031, as compared with 7,800 during 1914, but relative to the decreased number of patients the percentage of conservative operations has been well maintained, being over 46 per cent for 1915 as against 45 per cent for 1914. That was a gratifying tribute to the quality of the treatment in the direction of saving teeth which had from year to year been an increasing characteristic of the hospital work. The number of students on the roll at 31st December, 1915, was 54, as compared with 58 at the corresponding date in 1914.

During 1915 25 students joined for two years, as against 29 for the previous year. In addition, 7 joined for short periods. Ten students joined the army during 1915, and of these Captain Harley and Lieutenant Cameron were killed in action in France. The report contained a list of members of the staff who had received commissions in the Royal Army Medical Corps or who had been appointed army dental surgeons.

The chairman proposed the adoption of the report and the accounts. He said it had been expected that a good deal of work would be thrown upon the hospital in the treatment of soldiers and sailors, but up to the present the number of cases had not been so large as they had anticipated and for which they had prepared. The appliances were there, however, and would be available should any cases be sent to them. The finances of the hospital showed a slight falling off compared with last year in the amount of subscriptions received, but there was an increase from donations. He thought it would be a good thing if employers of labour throughout the city brought the claims of the Dental Hospital before their employees, and also pointed out to them the benefits which working men and women received from such an institution. The managers at present had under consideration a scheme for bringing the work of the hospital prominently before employers of labour with a view to their having prospective employees medically and dentally examined before engagement. There were certain trades, such as those concerned with the preparation of food, where such a scheme would be highly beneficial to the employees and also to the public interest.

DECREASE IN INSANITY IN SCOTLAND.—For the first time since the institution of the General Board of Commissioners in Lunacy in 1857 the Commissioners have this year to record an absolute decrease in the number of all classes of the insane in Scotland.

During the year 1915 the number of patients admitted to establishments was 3,607, a decrease of 142 compared with the previous year. The number admitted for the first time was 2,793—493 private patients and 2,300 paupers. Voluntary patients numbered 146, compared with an average of 119 for



the past ten years. Private patients who were discharged during the year as recovered totalled 212, and pauper patients 1,146. The number of private patients who died in establishments was 223, or 35 more than in 1914; and the number of pauper patients 1,574, an increase of 229. There were six fatal accidents to patients in establishments during the year, five of which were suicides.

On 1st January there were in Scotland 19,108 insane persons, exclusive of those maintained at home by their natural guardians. Sixty-three were maintained at the expense of the State, 16,480 by parochial rates, and 2,565 from private sources. The work of the Control Board during the year under review was considerably affected by war conditions. For reasons of economy the operations of the Mental Deficiency Act had to be curtailed, and no expenditure upon new buildings has been undertaken since the outbreak of war. The Edinburgh and Renfrew district asylums, two of the most modern and best equipped mental hospitals in the country, were transferred to the War Office.

The expenditure by local authorities on the maintenance of patients during the year was £315,420, which was £9,202 more than the expenditure in 1914.

GLASGOW DISTRICT MENTAL HOSPITAL, GARTLOCH. — The eighteenth annual report by the medical superintendent, Mr. W. A. Parker, M.B., of Gartloch Mental Hospital, deals with the affairs of the hospital during the year 1914-1915. On 15th May, 1914, there were 774 persons on the register; on 15th May, 1915, 754—there being 33 more men and 53 fewer women. During the year 278 cases were admitted, and 298 were discharged or died. Among the latter, 36 men and 26 women were discharged as recovered; 53 men and 47 women died; 36 men and 97 women were discharged as relieved; and 2 men and 1 woman were discharged as unimproved. Of those discharged as relieved, 100 were transferred to other Scottish asylums, 2 to Ireland, 18 to the care of friends, 13 were boarded out, and 3 discharged on expiry of warrant or emergency certificate. The average number resident at any one time was 773·4.

There was an increase of 15 in the admissions as compared with the previous year. Though the admission-rate was small, the character of the cases admitted was deteriorating *quâ* possible discharge or recovery, and congestion could only be relieved by large transference of cases. Of the admissions, 62·3 per cent were hopelessly incurable, being cases of chronic delusional insanity, organic and senile dementia, general paralysis, epileptics, primary dementers, and cases of congenital defect. The percentage of patients admitted above the age of 50 continued to increase (43·1 per cent as against 36·1 in the previous year, which was the previous highest on record). The percentage of cases between 30 and 50, and under 30, was lower than it had ever been.

The large admissions of senile and paralytic cases made the wards heavy, and increased the difficulties of skilled nursing. Mr. Parker quotes from his report of the previous year regarding the desirability of an extension of the accommodation by two blocks for phthisical cases of thirty beds each, two small blocks for convalescents, and cottages for the attendants.

The effect of the war upon admissions was not marked.

The recovery-rate was very low—22·3 per cent as calculated on the cases admitted. This was due in part to the character of the cases, and in part to the fact that recoverable cases are dealt with at Duke Street observation wards.

The death percentage, calculated on the average number resident, was 12·4 for the men and 13·5 for the women. Of the 100 deaths, 20 were due to arteriosclerosis with cerebral hæmorrhage or softening, 19 to diseases of the lungs other than phthisis, 14 to tuberculous disease, 13 to heart disease with pericarditis and aneurysm, and 11 to general paralysis. The percentage due to general paralysis was the smallest on record, but as the admissions from that cause were little below the average, this was probably accidental.

Next to senility (40 cases), alcoholism stood at the head of the determining causes of insanity (33 cases). It was closely followed by syphilis (32 cases), and by non-syphilitic bodily illness (31 cases). The Wassermann reaction was positive in all the cases of general paralysis. In only one was it negative in the blood, but in that case the cerebro-spinal fluid gave a positive reaction. The influence of alcoholism was apparent



both as a direct and an indirect cause of insanity. In cases not above the age of 26 at the time of the first attack of insanity 73·9 per cent gave a history of parental abuse of alcohol; of those whose breakdown took place above that age there was a history of parental abuse in only 47·2 per cent.

JAMES MURRAY'S ROYAL ASYLUM, PERTH.—The eighty-eighth annual report of this institution deals with the year 1914-15. The physician-superintendent, Dr. R. Dods Brown, states that on 1st April, 1914, there were 116 patients, and on 31st March, 1915, 118. Twenty-two persons were admitted, 13 discharged, and 7 died. The average daily number in residence was 115·64. Of the 22 patients received during the year 15 were admitted for the first time, and 7 had been previously treated in the Asylum. Five were readmitted for the first, 2 for the second time. Six patients entered voluntarily. In 12 of the 22 there was a hereditary predisposition to insanity or allied nervous disease, and 14 had suffered from one or more previous attacks. The average age on admission was 45·86 years, the ages varying from 20 to 80; three patients were over 60 and three over 70. Fifty per cent suffered from incurable mental disorder, while in the rest the probability of recovery was good. There was no increase in admissions on account of the war, and in no case could the war be assigned as a cause of the illness. The recovery-rate was 22·73 per cent on the number of admissions—30·0 for men and 16·6 for women. Of the 8 persons discharged unrecovered 3 were transferred to other asylums, 4 were removed for family convenience, and 1 was transferred from the voluntary to the general register. The deaths numbered 7—2 men and 5 women, the death-rate being 6·05 per cent, and the average age at death 67·28 years. Three deaths were due to pneumonia, 2 to heart disease, 1 to cerebral hæmorrhage, and 1 to old age. Hospital patients have been freely treated in the open air, both in shelters and in such occupations as gardening, with benefit to their physical and mental condition. During the year the matron of the female department left, and there were appointed in her place a matron for the whole institution, and assistant matrons for both the male and female side, all of them being fully trained hospital nurses. Female

nurses were at the same time introduced into the male hospital, and the results, as was to be expected, have been of an advantageous nature.

ROYAL EDWARD INSTITUTE FOR TUBERCULOSIS, MONTREAL.—The sixth annual report of the Royal Edward Institute for the study, prevention, and treatment of tuberculosis deals with the season 1914-15. It includes a secretarial report on the general activities of the Institute, which is evidently steadily extending the area of its usefulness, and a special report on tuberculin treatment by Dr. E. S. Harding. Of these, the latter has the greater claims upon our attention. Dr. Harding selects for tuberculin treatment those cases of phthisis in which the stethoscope detects "undoubted lesions with presence of râles, &c.", and in which the temperature either does not run above 99.2° or may be made to run below that level by a definite period of rest in bed. He does not deal with closed tuberculosis. "This leaves open a field of cases moderately advanced as well as the chronic, advanced, and arrested cases which are not running a temperature." In all cases where the temperature is normal the patient is encouraged to secure suitable work; where he has been kept in bed on account of fever gradual exercise is given as soon as possible. About 50 per cent of the cases under treatment have been working. In the past year 106 patients were put upon tuberculin treatment, their ages ranging from 10 to 50 years. Among them 57 workers gave a history of a total loss of 253 months' work before coming under treatment, or an average of four and a half months per worker. Forty-six patients gave a negative history of consumption in the family, while in 43 other members of the family (past or present generation) were affected. In 58 there had been no hæmoptysis, in 43 there was a history of blood-tinged sputum or distinct hæmorrhage. Twenty gave a history of impaired digestion, 70 had no digestive complaint. In 61 there was complaint of dyspnœa, in 28 no dyspnœa. Most of the patients complained of long-standing cough, and in 90 from whom a history was obtained its average duration was just over two years.

The average duration of treatment was over six months, some



patients receiving only one or two injections and not returning. The time for a full course is about nine months. During treatment 55 patients showed an average gain in weight of 3·8 lb., 51 an average loss of 3·1 lb. Among 99 patients who had been treated for more than two weeks the temperature remained normal under treatment in 63; 12 had occasional or regular fever between 99° and 100°, and 24 had intervals of slight fever (99°). Some had an almost regular evening temperature of 99°. Those in whom the temperature persisted over 99° seldom did well. Of the working-class patients under treatment, about half remained in some employment throughout their course. Dr. Harding believes that it is better to have the patient working if possible, and tries to put him on light work as soon as the temperature allows. The cases treated were either active or arrested. Early cases, whether active or arrested, were susceptible of benefit under tuberculin, but advanced cases had to be more or less arrested before they could receive it beneficially, since otherwise the coincident fever would contraindicate its use. In judging the results one has to reckon with the chronicity of tuberculosis and with the occurrence of long periods of arrest. In early gland cases the results were almost uniformly good. In the lung cases the difficulties of dispensary treatment were shown in the fact that 24 out of the 106 did not complete the full course. Fourteen cases died within eighteen months, owing probably to the fact that all stages of the disease were tried with tuberculin provided the temperature was normal. Thirty-three finished the course with good results, 6 without much improvement or with the disease still advancing, 8 with slight improvement. The rest were still under treatment at the end of the year.

**MEDICAL SICKNESS AND ACCIDENT SOCIETY.**—The thirty-third annual report of the Medical Sickness, Annuity, and Life Assurance Friendly Society shows an exceedingly satisfactory state of affairs. The number of new proposals received and accepted during the year was 233, and the total number of members on 31st December, 1915, was 3,325. Under the sickness and accident fund the premiums received, after deduction of 10 per cent for management, amounted to £22,661, the

interest to £6,129, and the claims paid to £19,975. The bonuses at age 65 or previous death came to £1,980, and £2,517 was transferred to investment reserve. The total of the fund at the end of the year was £170,229, 11s. 7d. From 450 members on active service there were 44 claims for sickness benefit and 5 for deaths; the amount paid in sickness benefit was £1,776. In the annuity fund the premiums received were £970, the interest £2,906, and the amount paid in annuities £2,659. The total of the fund at the end of the year was £78,609, 16s. 6d. In the life assurance fund 62 new proposals were received, of which 60, assuring £16,950 for total annual premiums of £463, were accepted. The premiums received were £887, interest £751, and £305 were transferred to investment reserve. The total of the fund at the end of the year was £21,014, 9s. 6d. The total amount of interest received on all funds during the year was £9,786, and the average rate of interest earned was £3, 18s. 5d. per cent. In regard to war risks the Society has found it advisable to limit the amount for which members can insure, who are either in or intend to join the R.A.M.C., but it charges no extra premium for either sickness benefit or life assurance, and holds members covered up to the limit prescribed. An appreciable number of members has taken advantage of these terms, generous in view of the risks.

LITERARY INTELLIGENCE. — We have received from the president of the Royal College of Surgeons in Ireland an intimation of the forthcoming publication of a second edition of the *History of the Royal College of Surgeons in Ireland and of the Irish Medical Schools*. The first edition, published in 1886, has long been out of print. The new edition comprises 900 pages, and before publication will be supplied only to subscribers at the reduced price of 17s. 6d., post free. The preparation of the history has been entrusted to Sir Charles A. Cameron, Honorary Secretary to the College. In addition to the history of the college and its library, museum, and schools, it comprises the following:—A medical bibliography; a history of the Dublin Barber Surgeons' Company, and brief histories of British and Irish medical and surgical incorporations; a record of the Chirurgeon and Physician Generals from the reign of



Queen Elizabeth; an account of the Irish private medical schools, and biographies of all their teachers; biographies of all the presidents and professors of the College from its foundation in 1784. In the medical biography, which comprises all the medical books published in Ireland down to 1900, some remarkable anticipations of modern medical discoveries will be found. In Sir Edward Barry's *Treatise on Consumption*, 1727, he quotes a statement of Martin's that "ulcers in the lungs when narrowly viewed with microscopes are covered with several, and from thence concludes that they take their first origin from such *animalcules*, which being inspired with air fix their situation on the lungs, and erode and ulcerate these vessels." If for animalcules bacteria be substituted, here is Koch's theory anticipated. In a treatise on the Animal *Æconomy* by Brian Robinson, M.D., 1732, it is stated that only a portion of the air, the *acid* part, mixes with the blood, and is essential to life. Oxygen was not discovered until thirty-one years later, and received its name from Lavoisier, as he believed it to be the cause of acidity.

The first 200 subscribers will receive gratis the volume (Roll of Honour) containing the names of the Fellows and Licentiates of the College engaged in the great war.

---

## REVIEWS.

*On Modern Methods of Treating Fractures.* By ERNEST W. HEY GROVES, M.S., M.D., B.Sc.(Lond.), F.R.C.S.(Eng.) Bristol: John Wright & Sons, Ltd. 1916. (7s. 6d. net.)

THIS volume deals with an important subject, and is written by one who has devoted special attention to the matter in hand.

The author has endeavoured to show that "the various methods of treatment should be brought into our service as occasion requires, instead of being regarded as independent, rival, or mutually destructive systems." By this he means the various methods which are "of practical importance to the modern surgeon;" and in the introductory chapter he utters a diatribe against the principle of the classical treatment of fractures by immobilisation. His remarks here are of the 'cheap' order; and we would like details of "that most fatal plan of a Liston's long splint with a trifling weight extension" (p. 13).

The subject of massage and mobilisation is treated of in Chapter II, and the author deals with it very fairly. In the next chapter extension by adhesive appliances is considered. This method is in the author's opinion "modern in the sense that it cannot be discarded or superseded at the present time in certain classes of fracture" (p. 51); the guarded nature of this opinion is in keeping with the apparent lukewarmness of the author's liking for the method.

In Chapter IV the author describes and advocates the use of nail-extension. The apparatus which he has devised for this is both ingenious and simple.

The subject of operative treatment is approached by a chapter on experimental observations. The substance of this chapter originally appeared as a paper in the *British Journal of Surgery*, and it finds a fitting place in the present work. As the result of his observations the author is led to the belief



that mechanical efficiency in the direct operative treatment of fractures can be obtained in two ways—(a) By the use of long plates, and pins or bolts which transfix and hold the bone by some broad flange or nut; and (b) by the use of strong, solid, intramedullary pegs. He also believes that the delay in union which sometimes results from operative fixation is due to some interference with the blood-supply of the bone-ends.

In Chapter VI the question of operative treatment is considered, and the author, while fully alive to the benefit derived from such treatment, by no means advises its employment in every fracture. His recommendations as to suitable cases are such as will be approved by most surgeons; and he advises that operation, if it be undertaken, be employed within ten days of the accident.

His practice as regards size of plates and very secure fixation pins is, however, not followed universally. The same remark applies to his leaving *in situ* these foreign bodies.

Chapters on operative treatment of special fractures, on open fractures, and on ununited fractures bring the work to a conclusion.

Although here and there the mental attitude of the enthusiast shows itself rather plainly, we still think the volume is a valuable contribution to the subject, and bears testimony to the painstaking work of the author.

---

*The Pathology of Tumours.* By E. H. KETTLE, M.D., B.S.  
London: H. K. Lewis & Co., Ltd. 1916. (10s. 6d.)

THE author states in his preface that he has tried to present as briefly as possible the chief points bearing on the general and special pathology of neoplasms, and that his aim has been to follow the generally accepted teaching. The result is an excellent book. It is well written, concise, and full enough for practical purposes. It appears to be admirably adapted to the needs of the young pathologist trying to acquire knowledge and experience, and will be valuable to all who have to deal with tumours. The debatable points—for example, the nature of hypernephroma—are very well handled.

The book is concerned principally with the microscopic side of the pathology of tumours, and this is right, for it makes it the complement of Sir J. Bland Sutton's *Tumours Innocent and Malignant*, which is best on the gross pathology. It is a book many pathologists have long desired.

The illustrations, apparently drawn by the author himself, are a feature of the work. The specimens have been very well chosen, and the drawings have an accuracy and fidelity which suggest photomicrographs combined with the clearness of good drawings. Most things of importance are figured.

The discussion of the value of rapid examinations carried out in the operating theatre will appeal to all pathologists who have experienced the futility of this proceeding in the difficult cases, which are those that really matter. Altogether the book can be very highly recommended.

---

*Pathological Lying, Accusation, and Swindling.* By W. HEALY, A.B., M.D., and MARY HEALY, B.L. London: W. Heinemann. 1915. (10s. 6d. net.)

THIS volume is one of a series of monograph supplements to the *Journal of Criminal Law and Criminology* which is authorised by the American Institute of Criminal Law and Criminology, the publication of which is intended to stimulate the study of the problems of delinquency.

The work has laid under contribution practically the entire literature on the subject, which has mainly been written by various Continental workers, and in addition puts before the reader intimate studies by the authors of 12 cases of pathological lying and swindling, 9 cases of pathological accusation, and 6 cases of border-line mental types, of all of which a full and consecutive history is given.

The authors define pathological lying as falsification entirely disproportionate to any discernible end in view, engaged in by a person who, at the time of observation, cannot definitely be declared insane, feeble-minded, or epileptic. Such lying rarely, if ever, centres about a single event; and although in rare cases its manifestation may be exhibited for a short time only, more



commonly it is carried through a period of years or even a life-time. The synonyms of pathological lying hitherto used are *mythomania* and *pseudologia phantastica*.

Although in epileptics, the insane, and the mentally defective lying is a common feature, the authors declare that the pathological liar forms a species by himself, and as such does not necessarily belong to any of these larger classes.

Pathological accusation—defined as false accusation indulged in apart from any obvious purpose—is a common accompaniment of pathological lying. The most striking form of pathological accusation is self-accusation of various forms; but it very frequently includes false accusation of others, thus becoming false witness and leading to embroilment of innocent persons in grave sensational and criminal issues.

Pathological swindling is an outcome of the natural evolution of this type of conduct from pathological lying.

The work of the authors has been based upon the study of the delinquencies of 1,000 young repeated offenders, the number of males being 694 and of females 306, the ages ranging from 6 to 22 years of age. Of the 694 males, 104 or 15 per cent, and of the 306 females, 80 or 26 per cent, were found to be excessive and notorious liars; but of these the exact number of pathological liars was difficult to determine, although eight or ten of the 1,000 cases might be so reckoned, and five more as engaged in pathological accusations without a notorious career in other forms of mendacity. Each of these 1,000 cases appeared individually many times in court as offenders.

The authors omit from their series consideration of excessive lying by children and adolescents because in their experience this is largely an age phenomenon, and only verges on the pathological when it is carried over into wider fields of conduct. They have not found in their series a single case in which pathological lying could be said to be the only form of delinquency, since it was usually associated with other forms of mendacity; but, on the other hand, they have found that there are cases of delinquency which do not exhibit lying as a feature, as among expert professional criminals, excepting the professional swindler.

In their studies of cases the authors have succeeded in giving very full information regarding the developmental and family

history, early environment, and early mental experiences of the individuals studied. Each of the 27 cases recorded reveals an extraordinary history; there is in each an astounding mendacity carried into various fields of life, and in each criminal delinquencies accompanied the mendacity.

The cases of pathological accusation offer strange facts to those unaccustomed to deal with the young criminal. We can corroborate much of this in our own experience, especially among those associated with sexual offences. But the accusations made sometimes involve charges of the most serious crimes—even murder—against persons who are later proved to be innocent, while in many other cases the accusations are mainly laid against the person himself or herself.

The chief characteristics of the pathological liar are a deep-set ego-centrism, an undue amount of self-assertion, little sympathy for the concern of others, and remarkably little apperception of the opinions of others. Heredity plays a not unimportant part in the production of the pathological liar. Of 19 of the cases described by the authors which were normal mentally, in three or four only was there no noteworthy defect revealed in their stock of origin; and of the others there was a definite history of insanity, alcoholism, or other form of nervous abnormality or degeneration of parents or progenitive stock. In most of the cases, male and female, there was evidence of perverted sex habits, of which masturbation was probably the most common.

The studies of the authors corroborate a well-recognised observation, viz., that females tend to deviate from the truth more readily than males; further, that the tendency to pathological lying commences in the early formative years; and that it is largely fostered by what they call "psychic contagion" or the contamination from prevalent lying in the family life. The point chiefly emphasised by the authors is, that the pathological liar may be a person who is seemingly normal in all other respects, and that a combination of ability in verbal composition, with proportional mental deficiencies in other fields of mind, is calculated to lead to the habit of prevarication and mendacity through exaggeration.

This work is well worthy the attention of all who are socially or professionally interested in the criminal tendencies of the



young, not merely because it focusses all that before had been written on the subject and offers new studies of typical cases, but also because it shows how, by suitable care and persistent treatment, some who have started and proceeded some distance upon a career of continuous mendacity may be rescued from a deplorable future to live a reasonably respectable life. Moreover, it gives the word of caution to those who are but too apt to believe the statements of young persons who have been participants in sexual crimes and offences.

---

*Urgent Symptoms in Medical Practice.* By ROBERT SAUNDBY, M.D. London: Edward Arnold. 1915. (7s. 6d. net.)

THIS book is stated to be intended as "a handy work of reference for the busy practitioner or student who desires to learn quickly . . . the significance of a particular symptom, the indications it affords, and the means whereby it may be relieved, due regard being had to the importance of attacking the true cause." It is arranged alphabetically, and thus in turning over its numerous headings one passes from subject to unrelated subject with an almost kaleidoscopic celerity. If the book is used purely as a work of reference no doubt the alphabetical arrangement has its advantages, but it precludes its use for any other purpose, and it makes it essential, therefore, that as a work of reference it should be satisfactory. That claim cannot be made for this book. Its title is a misnomer, for its headings include not only symptoms but diseases. Aneurism, asthma, bursitis, cholera, chorea, dysentery, elephantiasis, exophthalmic goitre, gonorrhœa, gout, hæmophilia, keratitis, lupus, lymphadenoma, malaria, measles, meningitis, and many others are diseases, not symptoms; and while some of them constitute a state of urgency, others do not fall under that definition.

Of the symptoms proper many that are described are not urgent, *e.g.*, alopecia, amenorrhœa, anosmia, athetosis, contusions, dwarfism, &c. Articles are devoted to conditions which are neither symptoms nor diseases—for instance, dreams, immunity, the menopause, menstruation, teething, temperature. There is even an article on death, which is the cessation of symptoms.

If we turn to the "means whereby symptoms can be relieved," we find that in this aspect the work is equally unsatisfactory. All that is said of the treatment of chorea is that "arsenic is the orthodox remedy;" there is no mention of treatment in connection with dyspepsia; in dealing with fever, "cold sponging, the cold pack, or ice cradle" are mentioned in these eight words; the treatment of typhoid fever is briefly and inadequately handled, while the statement that in our great towns the disease "is chiefly due to the use of mussels collected from beds contaminated by a sewer effluent" is somewhat reckless.

A book which claims to be a work of reference should furnish at least a summary of all the aspects of the subjects of which it treats. It is, however, as impossible to give a summary of disseminated sclerosis in nineteen lines as it is to say anything useful of ichthyosis in six, of ileus in twelve, or of priapism in four. The space devoted to such symptoms as "emptiness," haphalzia, hebephrenia, wheals, and wheezing would have been better given to filling out the deficiencies in articles of greater importance.

---

*The Dispensary Treatment of Pulmonary Tuberculosis.* By  
HILDA CLARK, M.B., B.S. London: Baillière, Tindall & Cox.  
1915. (15s. net.)

THIS is a well bound and printed volume of 276 pages, and containing a number of charts giving details of the cases treated. The writer has made a bold effort to assess the value of tuberculin as a therapeutic agent. An exhaustive analysis of cases attending the Tuberculosis Dispensary at Street, Somerset, at Glastonbury, Wells, and Portsmouth is given, with the results of tuberculin treatment. The author concludes that tuberculin can be given with benefit to all cases allowing a reasonable possibility of improvement. Many early cases are apparently cured with one or two courses of tuberculin with only ordinary attention to hygiene. A course of tuberculin is a justifiable and safe prophylactic in those cases where latent mischief is suggested. Treatment by tuberculin is not advocated to the exclusion of the sanatorium and other methods of treatment. It is a question of expediency, and sanatorium treatment



after all has only a limited rôle in the treatment of the disease. In the routine adopted, treatment was started with 0.001 c.c. P.T.O. Doses were given twice weekly, and increased 50 per cent or less according to reaction. P.T. was next used, then T.A.F., and, lastly, O.T. The volume can be confidently recommended to all interested in the study of tuberculosis, and the author is deserving of great credit for a very sound piece of work which can only have been produced at the expense of a vast amount of painstaking effort.

---

*Cancer: Its Cause and Treatment.* By L. DUNCAN BULKLEY, A.M., M.D. New York: Paul B. Hoeber. 1915. (\$5 net.)

ON a survey of the vast amount of work which has recently been done in connection with the etiology and treatment of cancer, it has seemed to Dr. Bulkley that the problem has been regarded too exclusively from the histological and surgical sides, and that experimental investigations have exhausted almost every possible line of research, with only negative results. All other possible causes of cancer being thus excluded, it would appear that deranged metabolism is the only possible etiological element, acting by inducing changes in nutrition, which itself is dependent on diet, and may be influenced by nervous impulses. The bio-chemistry of cancer shows that the cellular changes are associated with deranged metabolism; the blood changes indicate alteration in the action of the blood-forming organs; the secretions and excretions show departures from the normal indication of metabolic disturbances; and the cancer mass itself secretes a poison tending to augment its own growth. Cancer mortality is largely on the increase; its incidence follows the lines of civilisation, *i.e.*, of self-indulgence, and in particular increased consumption of meat, coffee, and alcohol; while the nerve strain of modern life contributes to the disturbance of metabolism. There is no single cause, and therefore no single remedy; in spite of surgery, 90 per cent of those once affected ultimately die of cancer; radium or the *x*-rays may at best remove an early lesion, but not its causes, and cannot therefore prevent recurrence; and with all means

of treatment the measure of success depends upon the earliness of interference. The same is true of preventive measures, and the earlier such steps are adopted as will limit the agencies inducing derangement of the body juices, the more chance is there of the arrest of the progress of cancer. In brief, the book is a plea for the simple life, and for a diet largely, if not entirely, vegetarian. By these means Dr. Bulkley has obtained many successes in cases of external cancer, and he lays down very precise rules for the careful regulation of the habits and the diet of the patient.

The chief argument against the adoption of such a line of treatment is, of course, the claim of the surgeon that "there's danger in delay." When it is remembered, however, that surgical interference removes, at best, the effect and not the cause, and cannot guarantee the patient against recurrence, there would seem to be no objection to the trial of the method after operation, or in cases in which operation is refused. Dr. Bulkley's experience is a long one, and his deliberate statement must carry considerable weight.

---

*Materia Medica and Pharmacy for Medical Students, with an Appendix on Incompatibility.* By REGINALD R. BENNETT, B.Sc.Lond., F.I.C. London: H. K. Lewis. 1915. (4s. 6d. net).

A NEW edition of this little book was necessary in consequence of the issue of the *British Pharmacopœia*, 1914. All the new drugs introduced into the pharmacopœia are included. In consequence of the classification adopted, these new drugs are classified with other drugs with whose actions the student is more or less already familiar. The descriptions of the various crude drugs are very clear, and should prove helpful in the recognition of specimens. The various tables should also prove of considerable assistance in acquiring a knowledge of the doses and strengths of the official preparations. The appendix on incompatibility is to be commended, as it treats the subject on broad lines. We can recommend this little book to students of materia medica and pharmacy.



## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

---

EDITED BY ROY F. YOUNG, M.B., B.C.

---

### SURGERY.

**Treatment of Infantile Paralysis.** By H. Winnett Orr (*Amer. Journ. of Orthopedic Surgery*, June, 1916).—The author assumes that there are five agencies of principal value in the treatment of infantile paralysis. These are—time, splints, exercise, surgery, and braces. If the best is to be obtained from them they must be used in a certain order, and with a definite relationship to each other and to certain stages of the disease.

Time is necessary to allow those muscles to recover spontaneously whose representative nerve cells in the cornua are not destroyed. During this watching period splints must be applied when it becomes apparent that the balance between opposing sets of muscles is much impaired. When splints have been fixed the limbs can be massaged, electrical treatment adopted, and voluntary efforts encouraged. All these satisfy the third requirement, viz., exercise. After one or two years spent on these measures it may be assumed that all the recovery to be expected has taken place, and recourse may be had to surgery. This should not be required for gross contracture, because the earlier measures should have prevented that, but it may be used for the transfer of power from strong to weaker muscles, for arthrodesis of paralytic joints, or for improvements in function. The last agency, braces, follows surgical operation, and should not be used instead of the other procedures. When braces have been applied the patient considers that his treatment is in the last stage, so that if they have been applied too soon there may be keen disappointment and unwillingness when other treatment is prescribed.—CHARLES BENNETT.

**Tunnels and Large Cavities in Bones.** By Norman F. Lock (*British Journal of Surgery*, July, 1916).—The author, who is on duty at the Queen Alexandra Military Hospital Extension, Millbank, has given particular attention to cases of chronic suppuration in bone. Certain of these are, of course, kept active by hidden foreign bodies, but others are due to the bone being tunnelled. Usually there has been a compound fracture, and drainage has been established by means of a tube traversing the diameter of the limb. The bone heals round this tunnel, but the interior remains as a sinus in the bone.

The author has found that, in certain cases, so long as this tunnel or sinus in the bone is walled all round by rigid osseous tissue healing does not take place even though the usual scraping and freshening operations are carried out. He removes one face of the bony wall, thus allowing soft tissues to fall in against the interior of the tunnel, and healing is hastened.—CHARLES BENNETT.

---

## DISEASES OF THE EYE.

**Hemeralopia amongst Soldiers.**—Dr. L. Weekers (of Liege), now with the Belgian Army, writes in the *Archives d'Ophthalmologie*, March-April, 1916, on the subject of night-blindness among soldiers.

Weekers clearly wishes it to be understood from the outset that this is quite a genuine condition, not a type of malingering. He points out that in most cases the first complaint of the men on coming before the doctor is that they can no longer see at night.

The condition is moderately frequently seen. Out of almost four thousand new cases seen at the clinic in nine months, there were almost four hundred cases (10 per cent roughly). Of this number, again, about 10 per cent had complained of defective night-vision before being called to the colours.

The greatest number of cases occur in winter naturally, and the cases affect men of all ages.

There is frequently some comparatively slight external disease of the eye at the time of consultation, but in many cases there is neither external nor internal disease of the eye, so far as can be found. In about 75 per cent of cases the men suffer from an error of refraction. Correction of this error usually gives the patient normal vision both central and peripheral.

The general state is usually good, but sometimes the men complain of depression, headache, loss of appetite, insomnia, &c. Weekers considers that some of the men have congenital hemeralopia, some a congenital tendency to it, and the remainder acquired hemeralopia.

The causes are many, and vary probably according to circumstances. Amongst them may be mentioned faults in dietary, dazzling by working in bright daylight without protective glasses, faults of refraction, and general want of tone.

Treatment must be aimed at removing such faults as are discovered in dietary, providing protective glasses and suitable spectacles.

The prognosis, according to the author, is quite good, so far as aptitude for service is concerned at all events.

Usually it is sufficient to put the men on light duties for a period of weeks, together with suitable treatment otherwise, to ensure their renewed efficiency.

—LESLIE BUCHANAN.

**Leber's Disease (Hereditary Optic Atrophy): A Suggestion as to its Cause.** By J. H. Fisher (*The Ophthalmoscope*, August, 1916).—This disease was first noted by Beer in 1817, who found that several female members in the third generation of the family under observation became blind at the climacteric period. Travers in 1821 reported three members of a family



who became both blind and epileptic at the age of puberty. Leber's paper was published in 1871, and collected all the earlier cases. He observed that the visual defect came on about the age of puberty in most cases. All cases due to organic cerebral disease or meningitis were excluded, but he thought individuals of a neuropathic type were especially liable to attack. Headache, vertigo, tremors, numbness of limbs, or epileptic attacks were evidence of the diathesis. The onset was generally rapid, both eyes affected, often to a different degree, and usually with an interval of a few months between them. In nearly every case a central scotoma with more or less complete field of vision was found. A slight congestion of the optic nerve may be seen at the commencement; but it is soon followed by the atrophic pallor. In 1909 Nettleship collected the cases up to that date with special reference to heredity, reproducing the pedigrees in many cases. He found recovery of vision in 25 out of 360 cases; but noticed that twelve to eighteen months elapsed before improvement set in. He suggested that some of the "astonishing cures" of long-standing "blindness" which are reported now and again may be examples of delayed recovery from this disease. Anticipation, or the earlier onset of a disease in successive generations, occurred in some cases. Successive members of the same generation sometimes exhibited anticipation, or the reverse; but more often the age-onset was approximately the same for any given childship. Twenty-three affected males had out of 100 children who had passed the period of onset only 6 with the disease. It was rare to find an affected female with an affected father or an affected mother. An affected female might transmit the disease to either sex; but some sons usually escaped. About one-half of all her children were affected. When the mother was unaffected, but carried the disease, rather less than one-third of the children suffered, and almost entirely the male sex. Many of the stocks showed more than normal fertility, but early mortality was prominent, especially among the male children. There was considerable evidence of longevity. The total number was 300 males and 60 females. The age of onset varied from puberty to 20 or 30, while in a few females the condition occurred about the climacteric.

The author is of opinion that it is difficult to imagine a hereditary tendency to disease of the macular bundles of the two optic nerves; and he suggests that there may be a liability of the pituitary body to a temporary disturbance of moderate degree, which would be adequate to explain the phenomena of Leber's hereditary optic atrophy. The following are some of the points which suggest association with the pituitary gland. The neuropathic type of individual and the occurrence of frontal headache, vertigo, and epileptiform attacks, also subjective phenomena of light and colour. Advancing cases of pituitary tumour sometimes complain of "seeing through a blue mist." The variations in degree of central amblyopia, before the final stage is reached, seem more consistent with an outside influence on the visual pathways.

The pituitary body is intimately associated with the sexual glands. Leber's disease occurs about puberty, and in the female sex also around the menopause. During pregnancy the anterior lobe hypertrophies, and hemianopia has been reported in pregnancy produced by such enlargement. "The optic chiasma does not lie in the shallow groove on the body of the sphenoid bone which may sometimes be seen in front of the olivary eminence. It lies vertically above the sella turcica." The diaphragma sellæ alone lies between the anterior lobe and the chiasma. It is a very variable membrane, being either a complete tentorium or only an edging or eave to the fossa, in which case pressure effects would be

more easily produced. In lesions of the optic chiasma due to pituitary body enlargement or growth evidences of a transient papillitis are found, the same as at the onset of Leber's disease. Atrophy follows in both cases if the pressure continues. Recovery may take place in both if the pressure is relaxed in time. The field of vision in some of the recorded cases of Leber's disease and of pituitary disease are similar.

Fisher found in an *x*-ray examination in one case a peculiar condition of the sella turcica. It was not enlarged, and the outline was not distorted, but the depression was "filled in with something which gives a cellular or honeycomb-like shadow; the same appearance is exactly repeated in a further skiagraph taken a fortnight later, and again a month later." The *x*-ray officers had never seen anything like it. A brother of the girl, who was also affected, had a normal skiagram, as well as several children of the same age as the patient, skiagraphed for controls. It will be of advantage if all recent cases of Leber's disease are investigated by *x*-rays, while an opportunity for *post-mortem* examination should be taken advantage of whenever it may occur. Organo-therapy with thyroid and with pituitary extracts may be of assistance.—W. B. INGLIS POLLOCK.

### *Books, Pamphlets, &c., Received.*

- The Diseases of Women: A Handbook for Students and Practitioners, by Sir John Bland-Sutton, F.R.C.S.Eng., LL.D., and Arthur E. Giles, M.D., B.Sc.Lond., F.R.C.S.Edin. Seventh edition. / With 150 illustrations. London: William Heinemann.
- The Child Welfare Annual: A Companion Year-Book to the "The Child," edited by T. N. Kelynnack, M.D. Vol. I. London: John Bale, Sons & Danielsson, Limited. 1916-17. (7s. 6d. net.)
- International Clinics: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles, edited by H. R. M. Landis, M.D. With the collaboration of Chas. H. Mayo, M.D. Vol. I. Twenty-sixth Series, 1916. London: J. B. Lippincott Company. (35s. net per year, 4 vols.)
- The Tonsil and its Uses: Vocal, Mechanic, and Physiologic, by Richard B. Faulkner, M.D. Pittsburgh: The Blanchard Company.
- Tonsils and Adenoids: Treatment and Cure, by Richard B. Faulkner, M.D. Pittsburgh: The Blanchard Company.
- Manual of Operative Surgery, by John Fairbairn Binnie, A.M., C.M.Aberd., F.A.C.S. Seventh edition, revised and enlarged. With 1,597 illustrations, a number of which are printed in colour. London: H. K. Lewis & Co., Limited. 1916. (32s. net.)
- The Practitioner's Medical Dictionary, by George M. Gould, A.M., M.D. Third edition, revised and enlarged, by R. J. E. Scott, M.A., B.C.L., M.D. Based on recent medical literature. With many tables. London: H. K. Lewis & Co., Limited. (17s. net.)
- The Johns Hopkins Hospital Reports. Vol. XVII. Baltimore: The Johns Hopkins Press. 1916.



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDED 26TH AUGUST, 1916.**

	WEEK ENDING				
	July 29.	Aug. 5.	Aug. 12.	Aug. 19.	Aug. 26.
Mean temperature, . . .	60·7°	60·0°	57·7°	57·0°	56·1°
Mean range of temperature between highest and lowest,	15·3°	8·5°	10·8°	3·0°	7·0°
Number of days on which rain fell, . . . . .	2	0	1	7	3
Amount of rainfall, . ins.	0·21	0·00	0·01	1·02	2·34
Deaths (corrected), . . .	267	231	248	257	271
Death-rates, . . . . .	12·8	11·0	11·9	12·3	13·0
Zymotic death-rates, . .	0·7	0·2	0·7	0·4	0·3
Pulmonary death-rates, .	2·0	2·0	2·2	2·5	1·9
DEATHS—					
Under 1 year, . . . . .	44	39	41	54	66
60 years and upwards, .	74	67	65	63	70
DEATHS FROM—					
Small-pox, . . . . .	...	...	...	...	...
Measles, . . . . .	5	1	1	1	2
Scarlet fever, . . . . .	3	1	1	2	2
Diphtheria, . . . . .	2	1	3	2	...
Whooping-cough, . . .	4	1	9	3	2
Enteric fever, . . . . .	...	...	...	...	...
Cerebro-spinal fever, . .	2	...	...	...	2
Diarrhoea (under 2 years of age),	9	6	12	20	38
Bronchitis, pneumonia, and pleurisy, . . . . .	22	28	29	35	29
CASES REPORTED—					
Small-pox, . . . . .	...	...	...	...	...
Cerebro-spinal meningitis, .	...	3	3	8	4
Diphtheria and membranous croup, . . . . .	26	15	15	16	12
Erysipelas, . . . . .	22	18	17	13	15
Scarlet fever, . . . . .	66	52	55	84	49
Typhus fever, . . . . .	1	1	1	...	...
Enteric fever, . . . . .	3	...	3	5	4
Phthisis, . . . . .	44	36	36	44	51
Puerperal fever, . . .	1	1	5	4	2
Measles,* . . . . .	100	90	78	45	43

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

---

No. IV. OCTOBER, 1916.

---

ORIGINAL ARTICLES.

---

THE SOLDIER'S HEART.

By IVY MACKENZIE, M.D.

THE inventive genius of man has not been able to conceive a mechanism so adaptable and flexible in function as the circulatory apparatus. Day in and day out in the healthy animal body it contrives to convey to every part the nutrition necessary for functional activity. Regulated at its centre and in its terminal arborisations by a complex nervous system and a series of subtle chemical substances, it accommodates itself to the demands of violent physical exertion, profound mental and emotional disturbances, and somatic ailments of various kinds, with an ease which is difficult to comprehend, and impossible to explain. In this adaptation every part of the circulatory mechanism conspires to produce a result which is compatible with the preservation of the body both in health and in disease. So perfect is the adaptation, and so wide in its range is the manifestation of mechanical power exhibited by the heart itself, that the question has been asked whether it is really possible for strain or excessive activity to render ineffective the working of an otherwise healthy circulatory apparatus.



Perhaps the most interesting series of observations in connection with this particular subject are those which have reference to that condition which is known as "the soldier's heart." Although the subject itself had already been discussed by Stokes in 1854, the first extensive analysis of the problem was undertaken by da Costa in his study of cases occurring among Union soldiers in the American civil war. Physical strain, mental tension, and incidental hardships and privations of the military life were held responsible for the occurrence of what was regarded as a purely functional disturbance of the cardiac activity, which in its more serious forms might result in permanent invalidity, and even death. The possibility of the occurrence of such a condition was confirmed by the studies of Clifford Allbutt, Peacock, Myers, Seitz, Leyden, Schott, and others, and the experiences of the present war have tended to revive an interest in the subject and raise afresh the old question whether, and if so, how, an otherwise healthy heart can fail from overstrain.

The present writer has had a unique opportunity of observing a large number of cases, the signs and symptoms in which have thrown considerable light on some aspects of this problem. There have come under observation not only soldiers suffering from cardiac weakness presumably of a functional character, but also a number of cases where similar signs and symptoms were ascribed to the strain and accidents of industrial life. In addition to these, a considerable number of cases have been observed where functional disturbance of the circulatory apparatus was associated with profound nervous disorders of an emotional character. The significance of the signs and symptoms of "the soldier's heart" may be more accurately appreciated when compared with similar conditions occurring outside the ranks of military service.

#### CIRCULATORY DEBILITY IN SOLDIERS.

In a very large proportion of soldiers invalided with heart trouble the symptoms can be accounted for by the presence of valvular or myocardial disease, incidental to rheumatism and syphilis, but when these have been placed on one side there remains a number where the symptoms of circulatory debility

associated with other complaints of a varied character are not accounted for by the evidences which are usually accepted as indicative of organic disease of the heart.

In the first place, these patients betray in their appearance and manner a general nervousness and excitability, with not infrequently a facial expression of emotional depression and anxiety. They complain of sleeplessness, restlessness, and palpitation of the heart. In other cases there is dulness and listlessness, and even drowsiness. Headache is a common complaint. In a few cases there is distress and anxiety associated with precordial pain. In one instance moderate exertion was followed by excruciating pain and fainting. In the great majority there is pain over the precordium, left shoulder, and down the inner aspect of the arm, and at times one hears complaints of a feeling of tightness over the heart, dizziness, and buzzing in the ears.

Not infrequently alimentary symptoms are pronounced. In the earlier stages the tongue is dirty, there is loss of appetite, the abdomen is sometimes distended, and constipation or diarrhoea may be present.

Examination of the heart shows in a certain proportion of cases a slight extension of the cardiac dulness towards the left. This extension, of course, varies with the severity of the disability. In some cases it is absent, while in others the heart may be considerably enlarged, with an area of dulness extending half an inch beyond the left nipple, and the cardiac movement presenting an undulating appearance of the chest wall. Epigastric pulsation is often pronounced. The heart's sounds vary considerably in different cases. In some they are distant and feeble, while in others they are loud and sharp. In some cases, more especially those in which enlargement of the area of dulness is present, there is a soft, blowing systolic murmur, most distinctly heard over the precordium. The cardiac rhythm is, as a rule, regular, although occasionally there is an interpolation of extra systoles, and, very rarely, auricular fibrillation is present.

The most characteristic feature about the pulse is its variability in rate. Slight excitement or slight exertion is accompanied by a pulse-rate of 120 to 160 beats per minute, and not infrequently a patient with a pulse of this rate in the upright



position may have a pulse-rate of 60 to 70 beats per minute when lying quietly in bed at night. This extreme variability in the pulse-rate is often the most definite evidence of circulatory instability in those cases where the cardiac symptoms are least pronounced. In such cases there is evidence of enfeebled circulation as a rule in the extremities. The hands are blue and cold, and in the feet there may be evidence of slight œdema.

As a rule the vasomotor system in the cutaneous vessels is easily excited, and a slight irritation of the skin produces hyperæmia. It has been noted that pressure on the abdomen, or the assumption of a bending attitude from the erect posture, may be accompanied by an alteration in the rate of the pulse; in some the pulse becomes slower and remains regular, in others it becomes slow and slightly irregular.

Symptoms are at times referable to the respiratory system. The patient may complain of want of fresh air, and this complaint may be accompanied by an absence of objective signs referable to the respiratory apparatus. A characteristic case of this kind was observed in which the patient was so restless and excited for want of breath that he insisted on getting out of bed and going to a door or window. He manifested no evidence of pulmonary disease, and while lying in bed his respirations were quite regular and of average rapidity. He showed evidence of vasomotor instability, his pulse varied greatly in rate, extra systoles were present, but the most outstanding feature of his case was an air hunger without objective signs. Air hunger may, however, be accompanied by objective signs. Respirations may be shallow and more rapid than normal, and a characteristic phenomenon occasionally present is that in which the inspirations are broken by short, jerky expirations. Breathlessness without any abnormality in its objective expression beyond increased rapidity is sometimes seen, and almost always the striking feature of such breathlessness is the painful consciousness of the difficulty present to the mind of the patient. The patient finds it impossible to take a deep breath, and the slightest excitement would appear to have a disturbing influence on the muscular movements of respiration. These respiratory abnormalities differ from those usually associated with organic heart disease when they occur, as they not infrequently do, without any

corresponding disorder at the same time of the cardio-vascular system. This may seem on the surface to involve a contradiction, in as much as it may be asked how, if the case be one of soldier's heart, is it possible for the most prominent manifestations to express themselves in the respiratory system, while the cardio-vascular system shows no corresponding disorder. It is exactly this contradiction which suggests a nervous or vasomotor origin of the condition under discussion, in as much as in the same patient at one period the respiratory signs may predominate, and at another period the circulatory.

The pupils are often dilated, and not infrequently there is a fine tremor of the fingers. The deep and superficial reflexes are sometimes exaggerated, and delayed sensation may be present.

The urine is normal, as a rule, so long as the patient remains in bed. In a number of cases, however, when the patient is allowed to get up and go about there is a slight albuminuria.

*Etiology.*—The antecedent factors in a series of cases may be varied. This applies not only to the story of the patient's symptoms, but also to the objective facts in the medical history. According to the patient, in one case the onset may be gradual, without being referred to any particular cause or incident. In another case the disability may have ensued with suddenness, and may be attributed to a particular strain or accident. The following cases, illustrative of a series, may be taken to represent these variations:—

CASE I. *Gradual onset.*—Pte. R. A., infantryman, in private life a marine engineer, strongly developed, gradually became weaker after marching and exercise, until he had to fall out, and was sent to hospital suffering from debility. His own account of his illness elicits no more than gradually increasing weakness, palpitation, headaches, and sleeplessness, and he can mention no cause to which he can attribute his disability. He has always been in perfect health, and during sixteen months in the army had never been under treatment. He has an anxious expression, his face is flushed, and he is restless and excitable under examination. The heart varies from 80 per minute in the recumbent position when not under examination,



to 140 per minute when in the erect position and under examination. Considerable variation in rapidity may exist inside one minute, and bending so as to cause pressure on the abdominal viscera may induce slowing of the heart rate with a certain amount of irregularity. Auricular fibrillation has not been observed, and the hands are cold and blue. Two months' treatment has not produced any recognisable change in the condition.

CASE II. *Rapid onset.*—Pte. A. B., cavalry regiment, a strong-looking, well-developed man, in the army for two years, and in perfect health, suddenly became giddy and fainted and was taken to hospital, where he was observed to have a slight pyrexia of unknown origin. After a week in hospital in France, he was transferred to Bellahouston Red Cross Hospital. On admission there was no fever. He was weak and exhausted, and complained of a feeling of tiredness and inability to get sufficient breath. As to the antecedent history of his condition, he could give no information beyond the fact that he had felt giddy and had fainted. On examination he looks exhausted, there is a sickly pallor of the skin, and vasomotor reaction is readily produced on stimulation. He complains of pain over the heart. His tongue is coated, his appetite is poor, and he is constipated. There is no objective evidence of breathlessness, but he complains of a feeling of difficulty in getting sufficient air, and at times becomes excited and even unreasonable on this account. In the recumbent position the heart beats at the rate of 60 to 66 per minute; an otherwise regular rhythm is disturbed by the interpolation of occasional extra systoles averaging about 4 in the minute. When the recumbent position is changed for the upright position, the heart immediately beats at the rate of 130 per minute, and during such a period of accelerated rhythm the extra systoles are not observed. An important feature of the examination is that a feeling of air hunger does not arise with increased rapidity of the heart, but would appear to ensue while the patient is lying quietly in bed. There is no enlargement of the heart, and no evidence of valvular disease. The sounds are normal in tone. This case having only recently come under observation, it is impossible to say anything as to the course of the disease.

CASE III. *Sudden onset associated with accident.*—Pte. J. M., infantry regiment, fell over parapet and was partly buried in débris. He was rescued in a semi-unconscious state, and, while in hospital afterwards, suffered from severe pain over the heart, which radiated to the left shoulder and down the left arm. Three weeks after the accident he was admitted to Bellahouston Hospital. He was restless and emotionally depressed, his face was flushed, the pupils were dilated, and he suffered from nightmare and broken sleep. His pulse was strong and voluminous, and in the recumbent position registered 100 per minute; it was regular in force and rhythm. The heart, judged by the area of superficial cardiac dulness, was not enlarged, but the sounds were loud and booming. The apex beat was forcible, and in rising to the erect position the cardiac-rate rose to 124 or 130 per minute. After a fortnight's rest, during which he had sedative treatment, he was allowed up, and in a friendly wrestling bout with a neighbour suddenly collapsed in a faint, after which he suffered from a return of the cardiac pain in a very severe form. The following day his heart was found to be dilated, there was a soft, blowing systolic murmur heard over the precordium, and the skin over the precordium was tender on being pinched. He was very restless and anxious, and his lips were slightly cyanosed, while his face was flushed and slight irritation of the skin readily produced hyperæmia. In a fortnight he recovered from this recrudescence of his original trouble, but during a period of three months' convalescence the cardio-vascular irritability remained, and he was discharged from the army as not likely to be fit for further service.

In the short records of these three cases are indicated the salient points of a cardio-vascular condition, which, in the absence of our knowledge of more proximate causes, may be attributed to the mental and physical stress of a soldier's life. This interpretation does not, of course, preclude the possibility or even the necessity of intervening factors, in the absence of which such conditions could not arise. Cases have come under observation where, from the history of the patient, one has heard of trench fever, shin fever, influenza, vomiting, diarrhoea, and pyrexia as preliminary incidents in the course of the



illness. It is impossible to apprise at their proper value even definite stories depending on such vague terms as influenza, pyrexia, &c., and where toxæmias and infections exist only in the imagination and without objective proof, their importance as etiological factors need not be taken seriously. This point will be referred to later.

#### DIAGNOSIS.

While the signs and symptoms which characterise the "soldier's heart" are quite definite, they are by no means peculiar to the disability which comes under that designation. In his attempt to investigate the nature of the disorder, the present writer has been guided in the selection of cases for the most part by the history of the illness and the previous health of the patient. Any history or suggestion of previous cardiac trouble or of predisposing factors, such as rheumatic fever or syphilis, has been taken as a disqualification for such a series. In the same way the presence or even the suggestion of organic heart disease would indicate that the case belonged to another category. The presence also of circulatory impediments outside of the heart itself must be regarded as contra-indicating the diagnosis of such a functional disturbance of the circulation as that which is under consideration. For example, the presence of a high blood-pressure, indicative of hyperpiesis or chronic Bright's disease, or the presence of emphysema or bronchial asthma, might disturb the balance of the circulation in such a way as to produce the signs and symptoms of the soldier's heart. But such an extension of the conception would necessarily invalidate any attempt to solve the problem whether or not the stress and strain of the military life were by itself sufficient to account for the condition in an otherwise healthy circulation.

1. The first condition, then, is that if a soldier's heart be diagnosed the previous history of the patient must suggest no evidence of cardiac disease or of other diseases predisposing thereto.

2. The second condition is that examination of the heart itself should not reveal the presence of organic cardiac trouble—that is, in the anatomico-pathological sense.

3. The third condition is that there must be no evidence of

disease in extracardial parts of the circulatory system, such as arterio-sclerosis, chronic Bright's, or emphysema, which might predispose to the occurrence of a cardio-vascular breakdown, even under ordinary circumstances.

The importance of these precautions cannot be over-estimated. This is well illustrated in the case of a young soldier who was admitted with weakness, palpitation, shortness of breath, and pain over the heart. On examination the heart was found to be rapid, beating at the rate of 120 per minute; there were occasional extra systoles and a soft systolic murmur. Under treatment the heart slowed down to 80 per minute, and there was now evidence of a slight mitral stenosis. There was a history of rheumatic fever; yet up till a month before admission to hospital he had not suffered from cardiac symptoms.

The effect of sudden and severe strain on a healthy heart in a man over 40 years of age with atheroma of the coronary vessels is shown in the following case:—

A. B., aged 45 years, a coalpit craneman, was subjected to a severe physical strain in attempting to hold up a heavy weight which was about to fall upon a small boy. When released from the strain he felt weak and faint, and there was a severe pain over the heart. After lying in the neighbourhood of the incident for two hours he walked home with aid. He was confined to bed for two months, and then got up and went about. No evidence of heart disease was present beyond breathlessness, occasional palpitation, and great rapidity of the pulse. After going about for a month he again became ill with the symptoms of progressive cardiac weakness, and had to take to bed. Examined by the writer six months after the accident, he was found to have an enlargement of the cardiac dulness to the left, an undulating movement of the precordium on the cardiac beat, a soft, blowing systolic murmur over the precordium, and a pulse-rate of 130 per minute. He lived six months longer, occasionally being able to get out of bed and sit at the fireside, and he died with the evidence of complete circulatory failure. A *post-mortem* examination was made by the writer, and it was found that all the chambers of the heart were dilated, and that there was a large organised infarction in the lower anterior wall of the left ventricle, on



which was situated an organised thrombus about the size of a hazel nut. There was fairly extensive atheroma of the coronary vessels.

This man died from cardiac failure, due to severe physical strain producing temporary dilatation of the heart and excessive rapidity of the cardiac action. Had the coronary vessels been healthy it is improbable that the same result would have followed. Two mechanical conditions are indispensable to the proper nourishment of the heart—the coronary arteries must be normal in structure, and a normal contraction and dilatation of the heart must follow each other at a moderate pace to admit of a proper distribution of the blood, which is aspirated, as it were, during dilatation into the spongy structure of the musculature and pressed out during systole into the veins. It is obvious that if the heart is subjected to the combined disability of narrowed coronary vessels and excessive rapidity there is a chance that some of those parts nourished by the terminal arborisations of the longest arteries will die from want of nutrition. In this particular heart at the time of the accident the muscle was in all probability normal. At least, the man had never suffered from any symptoms suggestive of cardiac weakness, and it is reasonable to suppose that, apart from the excessive strain, his heart might not have been the first organ to give way in the natural process of involution.

About a year after the observation of the preceding case another of the same type was seen, where cardiac debility ensued on exposure to severe and sudden strain, and where the course of the disease presented and the *post-mortem* examination disclosed practically identical features.

#### CIRCULATORY DISEASE DUE TO SHOCK IN AN ACCIDENT.

The exertions and privations of a soldier's life are so numerous and varied that it is quite impossible to analyse and detail in an intelligent order the various factors which may contribute to a disability such as that under discussion. The prevalence of mild infection, the tests of physical endurance, and the exposure to continual mental strain and shock, play a large part in the environment of men of the most varied constitution and temperament. There is also the factor of

individual susceptibility. There is a well-known variation in the proclivity or immunity to infectious disease in different individuals. This depends on subtle properties, for the most part inherited, but to some extent acquired, and these variations have no relation to the health of the individuals apart from the particular infections to which they may be exposed. Thus, two equally strong and healthy-looking individuals, free from organic disease so far as our present knowledge can determine, are seized with scarlet fever; one dies within two days, and, in the case of the other, the fever runs an ordinary mild course. In the same way, two equally strong and healthy individuals, so far as physical examination can determine, are exposed to the same sudden shock or strain, in the one case without effect, and, in the other, with the result of a serious nervous breakdown. The difference in the result is to be attributed, not to a difference in health, but to a difference in the natural constitution of the two nervous systems, and in their unequal capacity to withstand the same strain, altogether apart from the presence of disease. These considerations are suggested to emphasise the extreme variability of the factors which contribute to a breakdown in such cases as those under review. Some assistance, however, may be obtained in the solution of the problem by considering a case of functional circulatory disease which occurred under circumstances more simple than those to which the soldier is exposed. This is only one of a number of cases of the same kind which the author has observed.

T. K., 23 years of age, a miner, was crushed by a coal hutch, with the result that his pelvis was fractured and two of his ribs broken. After the accident he lay in a semi-conscious state for two hours, and he was carried home and remained in bed for three months. Within a week of the accident he complained of palpitation and of pain over the heart. These symptoms came on at varied intervals, and when he was allowed up to go about they were aggravated. At the same time he suffered from exhaustion and weakness out of all proportion to the disability immediately produced by the fractures. Prior to the accident he had had no illness and had been a strong, healthy lad, who had never shown any signs of weakness or of nervousness. Examined by the writer



a year after the accident, he was found to be extremely excitable and emotional, and would weep on slight provocation. His face was flushed, and stimulation of the skin produced immediate hyperæmia. The heart was enlarged, the sounds were loud and booming, and there was a slight systolic murmur over the precordium. There was great variability in the pulse-rate, which ranged from 80 to 156 per minute. At times the cardiac rhythm was perfectly regular, and at other times there was an irregular irregularity. He was sleepless and restless at nights, complaining of cardiac pain and of inability to get sufficient air. The pupils were dilated, and the deep and superficial reflexes were exaggerated. His tongue was usually coated, and he suffered from constipation. Occasionally the temperature rose to 100° F., and his skin was frequently clammy. The urine was normal; there was no abnormality of the blood, on cytological or bacteriological examination. He was under observation in hospital for two months, and during that period his condition varied considerably from time to time. At one time the heart would be slower and quieter in its action, his mental state would be more calm, and sleep would be sufficient, but such periods of well-being would be followed by others in which all the old symptoms returned with renewed force. Here, then, was a case in which, considered generally, the determining factor of the disease was a sudden physical and nervous shock in a young man who, up to the time of the accident, enjoyed perfect health. There was nothing, either in his history or in the physical examination of the heart, to account even for the circulatory disturbance, not to speak of the profound nervous disorder which constituted the most painful part of his disability. There was here no question of previous infection, no question of exposure to cold and privation, or of long and exhausting marches. He had not been subjected to the continuous mental strain of ever-present danger, or to the shock of exploding shell. There was nothing in his case, when tested by ordinary physical, chemical, and bacteriological examination, to suggest the presence of infection or toxæmia in the ordinary scientific sense of these terms. The interpretation which was placed on the case at the time was that the clinical phenomena were the expression of a profound vasomotor disturbance associated

with emotional instability, and that this had been produced by physical and mental shock.

#### CIRCULATORY WEAKNESS DUE TO CONTINUED NERVOUS STRAIN.

In the preceding case it was impossible to determine the relative importance of the psychic and physical factors in the accident which produced the neurosis. The following case illustrates the occurrence of circulatory weakness in a man leading a very strenuous professional life, and in whom the nervous exhaustion could be attributed only to prolonged and excessive nervous strain:—

G. K., 45 years of age, a strong and well-developed man who in his youth had shown great athletic power, began to suffer from progressive weakness, loss of flesh, tremor of the hands and legs, palpitation, and feelings of uneasiness over the heart. Previous disease, alcohol, and tobacco could be excluded as etiological factors, and for almost two years the intellectual exertion, strain, and worry of a busy professional life had been more than usually absorbing and exacting. On physical examination there was nothing unusual in the heart beyond an excessive rapidity of 120 per minute in the recumbent posture, and 140 while standing up. The pulse was regular in force and rhythm, and hyperæmia of the skin could be induced by slight irritation. He had a dull and somewhat anxious expression, the pupils were dilated, and the deep and superficial reflexes were exaggerated. The lungs were normal on physical examination, but the respirations were 24 per minute. His tongue was slightly furred, his appetite was good, and he was constipated. Although he bore an anxious expression, there was nothing in his conversation either at the time of his illness or previously to suggest that he was a "nervous" man, or that he was the subject of abnormal emotional excitement. Prolonged rest and fresh air with light diet, massage and sedative medicinal treatment produced a marked change in two months. He became stronger and more confident, and the pulse-rate sank to 80 in the recumbent posture and 90 in the erect. After four months' treatment, though still lacking his old energy, he was comparatively well.



In this case, although the symptoms were referable to some extent to cardiac weakness, and although the cardiac rate was excessively high, the circulatory disorder was only a part of the general expression of nervous exhaustion or neurasthenia. It is, however, important for the present study to recognise that in such cases the circulatory disorder may constitute a prominent feature in the pathological picture, and this is all the more important when it is remembered that the disability of neurasthenia may be very profound without involving in a recognisable form any part of the circulatory mechanism.

#### THE PATHOLOGICAL PHYSIOLOGY OF THE "SOLDIER'S HEART."

The observation of this condition, both in soldiers and in other cases before and since the war began, has led the author to the conclusion that it is dependent upon a disorder which affects not the heart alone, but the whole circulatory apparatus; that the disorder is a functional one, in as much as the symptoms do not represent the expression of recognisable structural changes in the organs involved; and that it is referable to a derangement in the physiological activity of the controlling nervous mechanism.

This view may best be explained and defended by a consideration of the nature and function of the circulatory apparatus as a whole. The current views on heart disease are based almost exclusively on the old pathological teaching of Virchow, and in the analysis of cases of circulatory failure attention is usually rivetted on the heart. The problems of heart disease cannot be solved in a satisfactory manner until it is recognised that the whole circulatory apparatus, in as far as it is composed of muscular structure at least, contributes to the propulsion and regulated distribution of the blood, and that wherever muscular activity is present it is inconceivable that that activity should not be under the control in some way or other of the nervous system. So harmoniously is the operation of circulation carried out in the healthy subject that it is only in the presence of more or less advanced disease that the importance of its component parts becomes manifest. It is not sufficiently realised that a profound disorder of one part of the circulatory system may bring disaster on the whole apparatus,

and that what is termed heart failure in some cases is only the last attempt of a perfectly healthy heart to make amends for the defects of other parts of the circulation.

In order to place in its proper context that condition which we are considering, the following classification of heart disease is improvised. It is intended merely to provide in the present instance, and for the present study, a convenient basis from which to view from the standpoint of functional anatomy the various forms of cardio-vascular disorder:—

1. Cases in which heart failure occurs as a result of disease in some section of the terminal arborisations of the circulatory system, and in which the heart itself is only functionally involved in the resultant cardiac failure (*e.g.*, arterio-sclerosis, emphysema).

2. Cases in which the heart is primarily involved in disease, and in which circulatory failure is associated with functional involvement of the terminal arborisations (*e.g.*, endocarditis, myocarditis).

3. Cases in which circulatory failure is due to a functional disturbance of the cardio-vascular system in general, and in which, to begin with at least, the ordinary anatomical lesions are not in evidence (*e.g.*, Basedow's disease, paroxysmal tachycardia, soldier's heart, &c.)

The meaning of such a classification for the present purpose will be obvious on considering a few of the more common types of cardio-vascular disease from the point of view on which it is based.

4. In the first place there are cases of circulatory failure in which the primary lesion or functional abnormality is operative in the terminal portions of the system. Take for example arterio-sclerosis of the high blood-pressure type, or the granular kidney with enlarged heart; these cases not infrequently die from what is called cardiac failure, and in the later stages, where both sides of the heart have become dilated, there is no doubt evidence that the heart has failed; but in the great majority of these cases the heart, though enlarged to twice its size, is, practically speaking, a perfectly healthy organ, no doubt much larger than usual, but also correspondingly stronger and perfectly efficient as a pumping apparatus. Its failure is not due to inherent inefficiency, as judged by the



standard of capacity of the average heart, but is due to the fact that it has been called upon to overcome a resistance, which in the healthy nature of things it was never intended to meet.

The same thing applies with equal force to those cases of cardiac failure which are due to emphysema, atelectasis, and deformity of the chest. These hearts, perfectly sound in themselves, break down through deprivation of the accessory forces of circulation which come into play through the activity of healthy lungs and thorax. The diminished thoracic movement and the distension and destruction of the lung in emphysema increase the burden which the rest of the circulation, and particularly the heart, must bear. Every square inch of lung which distends and collapses normally assists in the propulsion of a certain amount of blood. In atelectasis the circulation is deprived of this assistance in proportion to the amount of collapse. Every expansion and contraction of the thorax aids by the variation in pressure in forwarding the flow of blood, and any interference with this free movement will be prejudicial to the circulation, and correspondingly increase the work of the heart.

Belonging to the same category of extra-cardiac causes of circulatory failure are those cases of vasomotor paralysis which sometimes follow infectious disease, and which the author has observed in several instances in epidemic cerebro-spinal meningitis. In this disease it sometimes happens that after the acute or febrile phase has passed off, and the patient appears to be convalescent, the expected course of events is interrupted by a sudden collapse, terminating fatally. This, of course, is sometimes explained by acute dilatation of the ventricles, but cases were observed where this explanation did not apply. In these, the change was marked by a sudden increase in the pulse-rate from, say, 70 or 80 per minute to 120 or 130. Extreme pallor accompanied this change. The patient might live for twenty-four hours without showing any cerebral symptoms, but gradually became weaker. On *post-mortem* examination the abdominal organs would be found dripping with blood, the patient having died from paralysis of the splanchnic circulation reflected in weakness and excessive rapidity of the cardiac action.

*B.* The cases which come under the category of primary heart disease with secondary functional involvement of the terminal branches of the circulatory system comprise all those types of endocarditis, myocarditis, pericarditis, due to rheumatism, syphilis, and other infections. The subject of an endocarditis may go about for years without being aware of the presence of disease. There may be aortic incompetence or mitral stenosis, with a sense of perfect well-being. These conditions may be present even without any considerable hypertrophy of the cardiac chambers primarily involved in the disability. The heart is, of course, working at a disadvantage, but the greater demand on its activity is compensated in two ways. First, central accommodation is achieved by dilatation and hypertrophy of the chambers immediately involved. Second, peripheral accommodation takes place through stimulation of the afferent cardiac fibres, resulting in a peripheral vasomotor reaction. It is this latter reaction which constitutes the functional accommodation of the peripheral part of the circulation to the primary disability existing at the centre. There seems to be no doubt that the depressor fibres of the vagus situated in the region of the aorta exercise an accommodating influence over some parts of the peripheral circulation in cases of aortic disease with high intra-ventricular pressure. In the aortic wall of the pigeon sensory bodies resembling Pacinian corpuscles have been described by the author and Dr. Jane Robertson, and these, no doubt, have their representatives in the human heart, and are in all probability associated with the depressor branch of the vagus. The excess of  $\text{CO}_2$  and other products of circulatory impediment present in the blood may act as hormones which influence the adaptability by dilatation or constriction in the periphery. When what is known as complete cardiac failure occurs, it is supposed that this is due to a back pressure in the venous system, resulting from cardiac weakness. This is, no doubt, in a sense true, but not in the simple sense which regards the peripheral circulation as a complex of tubes with merely physical properties. Cardiac weakness with dropsy, in cases of organic heart disease, results from both an exhaustion of the heart reserve itself, and a failure on the part of the peripheral circulation to make good the defect produced by the inefficiency



of the central pump. It is highly probable that in many cases such complete failure ensues only when the accommodation maintained through the reflexes of the vasomotor system breaks down. It is a fact of common experience that the state of the cardiac musculature or the condition of the coronary arteries or the degree of constriction or incompetency of the valves does not always account for the general signs of cardio-vascular failure with dropsy. In some cases cardiac failure occurs without extensive evidence of disease of the heart itself, while, on the other hand, a case of mitral stenosis may die apparently from inanition resulting from constriction of the mitral orifice, and yet present no evidence of œdema or collapse on the part of the peripheral circulation. The author has seen two such cases come to *post-mortem*, and the most reasonable explanation of this admittedly rare phenomenon is that the functional accommodation of the peripheral circulation was maintained longer than is usually the case.

C. The cases which come under the third category, namely, that of general functional disorder of the circulation without structural change in the anatomical substratum of the apparatus, comprise a considerable variety, both as regards origin and symptomatology.

1. According to some authors, certain cases of paroxysmal tachycardia belong to this class, although, as a matter of fact, there is ground for believing that many of these cases are due to nervous disturbance of the regulatory mechanism of the heart, and perhaps even to muscular degeneration of the heart itself.

2. Certain toxic disorders of the cardio-vascular system would also be included, such as those due to nicotine and hyperthyroidism.

3. Another series is that represented by cardio-vascular disturbances of reflex origin, among which the most important are those arising in association with disturbances of the alimentary and sexual systems. There is some doubt whether in such cases the vascular disturbance is really a secondary phenomenon; concomitant derangement of two systems (*e.g.*, sexual and circulatory) may represent the common symptom-complex of a neurosis.

4. The most important series in the category of functional disturbances of the circulation is that which includes the

disorders of psychic origin, and it is to this series that the soldier's heart in all probability belongs.

It is a matter of everyday experience that the heart reacts to emotional shocks. Apprehension, fright, anger, and joy, in their more intense forms, produce rapidity of the heart's action, and even palpitation, depending on the constitutional nervous stability of the subject. These phenomena occur in the ordinary course of everyday life, and it is not difficult to understand that the conditions of warfare, with their attendant privations, exhaustion, and exposure to emotional storms of the most severe character, are likely to produce in some subjects circulatory disturbances of a grossly abnormal nature. An attempt to deal with this problem in all its manifold bearings would extend beyond the limits of the present study. It may be suggested, however, that the emotional shocks to which the soldier is subjected do not always leave their impression within the field of consciousness, and that many of the symptoms, very real and disturbing in themselves, are in essence of a hysterical and hypochondriacal character. The particular mechanism which involves a circulatory disturbance as the result of emotional shock may not be easy to define in a given case. The close relationship between the emotional life and the sympathetic nervous system is an accepted fact in clinical experience, and the interdependence of the sympathetic nervous system and the internal secretions is a fact which has been established by physiological experiment and clinical evidence. How far these internal secretions play an intermediate rôle in the production of cardio-vascular disorder is a matter for speculation, and is of little practical importance here. The fact remains that in the case of the soldier the whole cardio-vascular system is in a condition of instability in the disease under review. Concomitant symptoms in most cases suggest the presence of a neurosis, and a comparison of these symptoms with corresponding cases in other walks of life suggest an emotional disturbance as the *fons et origo* of the disease.

In the cases which the author has examined there has been nothing to suggest that it was the thyroid any more than the adrenals or pituitary or any other internal secretion which caused the trouble. Intense emotional excitement may produce a dryness of the tongue, a disagreeable taste in the mouth,



disorder of the digestive secretions generally, and, in fact, a disturbed and pathological activity of practically any secretion in the body, and there is nothing to suggest in the cases seen by the author why any particular secretion should be singled out for special prominence.

There has been no evidence that infection or toxæmia has been an immediate agent in the production of the disease—that is to say, in the sense in which the diphtheria toxin or cordite may produce circulatory disorder. It may, however, be the case that mild infections or general debility have in some instances predisposed to the disastrous influence of the emotional shock. Nor is there any evidence to show that in cases of soldier's heart the disease has resulted from strain of a physical character. These cases do not show the evidence of overtaxed hearts such as one finds in athletes and alcoholics. The cardiac weakness so prevalent in an industrial centre like Glasgow in those who have led a strenuous physical life and become prematurely aged from cardio-vascular disease is quite a separate entity. In the case of those men the disease is due to hard physical work, indifferent food, and excessive alcohol, and it finds its expression primarily, in the author's opinion, in premature arterial degeneration, and only secondarily in cardiac failure. In any event, the cases observed by the author afford no evidence in favour of the contention that a healthy heart can succumb to the physical strain of a soldier's life.

#### PROGNOSIS.

The outlook in these cases depends on the gravity of the symptoms, and the extent to which the feelings of the patient have become involved in a mental complex. Where the patients are very exhausted and in a semi-dazed state, the outlook as a rule is good, and with rest and sedative treatment the symptoms in some cases have been seen to pass off in a week or ten days. Where the palpitation is violent, the feeling of oppression excessive, and the pains recur at intervals with intensity, the outlook is not so hopeful; and where, in addition to the cardio-vascular symptoms, there are disturbances of an alimentary character, the disease has been found even more refractory.

## TREATMENT.

Most important in the treatment of these cases is a regulation of the environment so that the patient may have rest both to body and mind. An attempt should be made to emphasise to the patient that the heart itself is not diseased, and that the symptoms under treatment are likely to pass off. Warm baths (at 30° to 34° C.), to which salt or carbonic acid has been added, should be given, for a quarter to half-an-hour, twice daily. Where palpitation is severe, an ice-bag should be placed over the precordium.

Special attention should be paid to the treatment of sleeplessness, restlessness, and alimentary symptoms. Tobacco and alcohol should be avoided in every case.

A mixture which the author has found extremely beneficial in many cases is the following:—

R—Ammon. brom.

* Liq. extract ergot (P., D. & Co.),	. āā	̄vi.
Tinct. digitalis, . . . . .	. .	̄ii.
Spt. ammon. aromat., . . . . .	. .	̄ss.
Aq., . . . . .	ad	̄vi.

SIG.—(1) ̄ss. ex. aq. p.c. every four hours for two days ;  
 (2) ̄ss. ex. aq. p.c. three times a day for a week after ;  
 (3) gradually reduce to twice daily, and then once daily according to reaction.

When the symptoms of fatigue have passed off, massage should be employed, and cool baths should be given instead of warm baths. Graduated active exercise should then be commenced, and continued under observation. In this way, equilibration of the circulation is mechanically assisted, and the mental attitude is diverted to a more normal course.

Except in more acute stages of the disease, the patient should not be kept in the same hospital or in the same place for any length of time. It is extremely important that the environment should be changed so as to lift the mind out of a routine in which the patient may become habituated to his symptoms.

\* I have to express my indebtedness to Parke, Davis & Co. for a supply of ergot aseptic for hypodermic use in soldiers. I have used the ordinary liquid extract prepared by the same firm as a nervous sedative for several years with excellent results.



## THE REDUCTION OF MYOPIA IN CHILDREN OF SCHOOL AGE.\*

By W. B. INGLIS POLLOCK, M.D., F.R.F.P.S.,

Assistant Surgeon, Glasgow Eye Infirmary ; Ophthalmic Surgeon, Ayr  
County Hospital, Govan Parish, and Ayr School Board Clinics.

PROGRESSIVE myopia is a most serious affection of the eyeball. It may cause blindness by separation of the retina ; by circumscribed atrophy of the choroid and retina at the macula ; by the myopic crescent extending from the optic nerve entrance until it involves the macula ; or by opacities and hæmorrhages in the vitreous. Cataract is not uncommon in myopia ; but the operation for its removal is always dangerous. There is one advantage which myopia confers, and that is, that primary glaucoma rarely attacks the myopic eye. These complications belong to myopia of 6 dioptries and upwards ; but they may occur with lower degrees than that. They are most frequent after thirty years of age ; and the liability increases as life advances. It is rare to find such complications during the school age ; but there are, at least, two cases of myopia with atrophy of the macula in attendance at the Govan Parish School Board Clinics. One is a boy of 5 years of age, and the other is a boy of 9 years of age.

Myopia begins almost always during school life. In my own investigations I found less than one half per cent of myopia among children of six years of age, most of whom had been at school for six months or more ; and I have once or twice seen myopic children under the school age. It is rare for myopia to begin after fifteen years of age. Pain or discomfort in the eyes seldom occurs at the onset or in the early stages, although persistent asthenopia is not infrequent in adult life. There may be nothing to attract attention unless when the child holds the book closer to the eyes than

\* Presented to the Association of School Medical Officers of Scotland on 18th March, 1915.

normal; but even this symptom may be absent since, in the lower degrees of myopia, reading is still possible at the usual distance, and the child knows its way about the house and the surroundings from before the onset of the myopia. Medical inspection of school children is therefore of the greatest value, because the notice from the school medical officer that the child is suffering from defective vision is usually the first intimation which the parents receive in these cases. Myopia progresses insidiously and may reach 6 or even 9 dioptries before being discovered. These children are usually highly intelligent, and they may escape detection during the testing of the vision by memorising the test-types or by peering between the eyelids.

Numerous controversies have been fought over different questions connected with myopia. Many of these are now only of interest to the medical historian; but the question of whether there are two distinct forms of myopia is still under discussion. Although there has been the greatest divergence of opinion upon this subject, the question may be considered to have been settled by the work of Hirschberg and others. They have been able to relate cases which they have followed from the earliest stages to the highest degrees of myopia. Experience of that kind is worth any amount of theoretical reasoning. Near-work myopia, as it is called, may pass at any age into the higher forms of deleterious myopia. The progress is usually gradual, and the individual thinks that he requires stronger glasses, or he may not trouble about the matter. In other cases the change takes place more rapidly, especially after some forms of debilitating disease. It may be useful to mention here the classification usually adopted. Low myopia is anything under and up to 3 dioptries. Medium myopia is myopia of over 3 and up to 6 dioptries. Between 6 and 15 dioptries is termed high myopia, while above 15 dioptries is very high myopia, or all above 6 dioptries may be regarded as high myopia. Children of school age should be classified a little differently. The term high myopia for a child of ten years or younger should be applied to 3 dioptries or upwards.

*Treatment.*—The first step in the treatment of progressive myopia is to stop all near work, including reading, writing,



sewing, and painting for a prolonged period. The child should spend the greater part of the day in the open air in parks or spaces where there are long vistas. The patient is therefore much better in the country or at the coast than in towns where the range of vision is circumscribed by the surrounding buildings. Added to this there is also the benefit of pure air and probably more wholesome food. General tonics such as the syrup of the iodide of iron and cod-liver oil should be administered.

I have found great success from the continuous employment of atropine in reducing myopia. Some recent writers have said that they had used atropine for this purpose but without success. Quite recently I have learned that Schiess, of Basle, stated in 1872 that he had obtained a slight decrease in high myopia by the use of atropine. My own work began about six years ago with the extension of the use of atropine for testing the refraction. It is common knowledge that after a week of atropine the myopia is about a diopetre less than prior to using the atropine. This change has always been regarded as due to the relaxation of the accommodation, and accordingly no further reduction in the myopia was thought to be possible by continuing the mydriasis. My reason in the first instance for an extended use of atropine was to prevent the patient from doing near work, and thus to give the eyes a more thorough rest; and also, if possible, to prevent a further increase in the myopia. I found, however, that in certain cases after two or three months of treatment the myopia not only stopped increasing, but actually showed a decrease. This induced me to persevere for much more prolonged periods, and the result has been most satisfactory.

The following are a few typical cases from the Govan Parish School Board Clinics:—

CASE I.—A girl, L. M., aged 7 years, was brought to Partick School Clinic on 10th December, 1913, with high myopia. She was put upon atropine and excluded from school indefinitely. After a week of atropine ointment her refraction was measured by retinoscopy at the macula, right and left eye vertical — 11 D., horizontal — 9 D. She was ordered to persevere with the ointment, and syr. ferri iodidi was prescribed. The mother

was advised to give her plenty of eggs and milk food, and this was carried out. On 2nd February, 1914, the measurements were right eye - 8 D. - 6 D., and left - 9 D. - 7 D., vertical and horizontal respectively.

On 2nd March, 1914, right - 7·5 D. - 6 D., left - 7·5 D. - 6 D.

From June to September she was taken to a farm in the North of Scotland by her mother, who was encouraged to do this as the child always came to the Clinic with her pupils well dilated, and she could be trusted to continue the treatment.

On 9th September, 1914, right - 6 D. - 4·5 D., left - 6 D. - 4 D.

On 28th October, 1914, the last measurements were taken, when both eyes had - 6·5 D. vertical, and - 4·5 D. horizontal.

The above case shows a reduction of 4·5 D. in all meridians after ten months of treatment, which does not include any reduction due to the first week of atropine.

CASE II.—A girl, J. B., aged 9 years, was brought to the Partick School Clinic on 25th February, 1914, with high myopia and large myopic crescents, wearing right and left - 8 D. sph. with - 1·5 D. cyl. axis 180°, which had been prescribed in the Glasgow Eye Infirmary two years previously. After a week of atropine her right and left eye measured - 18 D. in the vertical and - 16 D. in the horizontal meridian. She was given the same treatment as the previous case.

On 16th September, 1914, right, - 14 D. - 10 D.; left, - 13 D. - 9 D.

This case shows a reduction of 4 D. in the right eye, and of 5 D. in the left eye after seven months of treatment, excluding the first week of atropine.

CASE III.—A boy, G. M'G., aged 11 years, began treatment in the Govan School Clinic in February, 1914, for high myopia. After a week of treatment, right, - 11 D. - 6 D.; left, - 7 D. - 2 D. By 21st May, 1914, right, - 8 D. - 4 D.; left, - 6 D. - 1 D. This case shows a reduction of 3 D. in the right eye and 1 D. in the left eye after three months of treatment.

CASE IV.—A girl, N. O., aged 9 years, began treatment for high myopia in Govan School Clinic on 17th November, 1914. After a week of atropine, right, - 13 D. - 12 D.; left, - 12 D.



—11 D. On 2nd February, 1915, right, —10 D. —8 D.; left, —9 D. —8 D. This case gives a reduction of 3 D. in each eye in three months.

These are cases of high myopia; but a reduction of 3 or 4 D. has also been obtained in a number of cases of low myopia, some of which have been converted into low hypermetropia. Relapses have occurred in several cases during the summer months when the Clinics were closed. It is probable that the treatment was not carried out during that period. Most cases maintain the improvement after the treatment is stopped, although there is a tendency for the myopia to continue increasing as the child grows older, and treatment might have to be again instituted. The cases should, therefore, report themselves every six months.

I have also employed this treatment for adults, and have had satisfactory results even when the patients continued their near work, *e.g.*, clerks and medical students. The atropine prevents accommodation, and temporary glasses may be necessary for near work, depending upon the amount of myopia. In private cases I generally employ atropine sulphate 1 gr. to 2 dr. of water, and in the School Clinics 1 gr. to 2 dr. of vaseline. Now that the price of atropine has risen to such an extent the ointment is only given to cases in which the parents can be relied upon to carry out the treatment efficiently and without waste. All other children attend the Clinic daily in order that the nurse may apply the ointment.

The children must be watched carefully at the beginning of the treatment, as occasionally, but happily in very rare instances, there is an idiosyncrasy to atropine poisoning. This may take the form either of atropine poisoning or of atropine dermatitis. I have only seen the former in three cases in private practice in young children of a highly nervous temperament, who had a slight attack of delirium during the first night. The atropine must be stopped, and a mild purge administered. I have never had such cases in hospital practice, although I must have employed atropine in several thousand cases. Atropine dermatitis is not so rare, and it occurs usually at the beginning of the treatment, but it may be later. Both eyelids become œdematous, and have a faint red colour, which

dies away towards the margins of the swelling, which is, as a rule, sufficiently intense to close the eye. Scopolamine or holocaine may be substituted for the atropine, and zinc ointment should be applied locally.

The great difficulty has been the exclusion from school work. Parents are rarely willing to keep their children from attending school for such periods as the treatment requires. The compromise so often adopted of allowing the child to go to school, but not to do reading or writing, is liable to end in a certain amount of work being attempted. The classes which have been devised by Bishop Harman for the education of myopes and of the partially blind are admirably suited for this treatment, since all reading, sewing, and fine work are forbidden. The blackboard work which forms an important element in the scheme of these classes can be safely undertaken by children with dilated pupils. Temporary glasses may be prescribed for this purpose. It is extremely satisfactory that the Govan Parish School Board will shortly open the first class in Scotland. Thus the work in the School Clinics will be very materially aided, as the education of the child will no longer present any difficulty, and the child will be under continued supervision all day while under the atropine treatment. We hope to extend the system of myope classes in the near future.

*9th September, 1916.*—Since the above was written the class has been in operation for over a year, and has justified all our expectations. The twenty places have been constantly full, and many of the children travel long distances to the centre, which is in Broomloan Road School, Govan. Each pupil comes to see me at least once a month in the Clinic, when the progress of the case is carefully noted, treatment ordered, and instructions sent when necessary to the teacher, who has been a very great help. Fuller details of these Classes for the Education of the Partially Blind will be found in a previous paper of this *Journal* (December, 1914).

---



## Obituary.

---

### ON SERVICE.

LIEUTENANT WILLIAM WATT FARRAR, M.B., CH.B.GLASG.,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce the death of temporary Lieutenant W. W. Farrar, which occurred on 11th August at the 42nd Stationary Hospital, Bombay. Lieutenant Farrar, who was a son of the late Dr. Farrar of Gainsborough, and grandson of the late Rev. W. M. Watt, minister of Shotts, studied medicine at the Universities of Glasgow and St. Andrews, and took the degrees of M.B., Ch.B. at Glasgow University in 1901. Settling thereafter in Misterton, Nottinghamshire, he soon acquired a prominent position, and held many important appointments in the district. He was medical officer of health for the Misterton Rural District Council and for the Misterton District of Gainsborough Union, for which he was also public vaccinator; he was certifying factory surgeon, medical officer for the Post Office, and medical examiner under the Elementary School Teachers' Act, and he also acted as medical officer for several insurance companies. He was appointed temporary Lieutenant in the Royal Army Medical Corps in October, 1915.

---

CAPTAIN THOMAS CAMERON HOUSTON, M.B., CH.B.GLASG.,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce the death of Captain T. C. Houston, R.A.M.C., attached Scottish Rifles, from wounds received in action on 25th August, which proved fatal on the same day. A nephew of Mr. James Houston, Linkieburn, Muirkirk, Captain Houston studied medicine at the University of Glasgow, where he took the degrees of M.B., Ch.B. in April, 1915. He applied

for a commission immediately afterwards, and was gazetted Lieutenant, R.A.M.C., being subsequently promoted to the rank of Captain.

---

CAPTAIN THOMAS STRAIN, M.D. GLASG.,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce that Captain Thomas Strain, M.D., R.A.M.C., has died on active service towards the end of September. He was the youngest son of Mr. William Strain of Briarbrae, Wishaw, and was a student of medicine at Glasgow University and also at the Anderson and St. Mungo's Colleges. He took the degrees of M.B., Ch.B. Glasg. in 1906, the D.P.H. of Cambridge in 1908, and the degree of M.D. Glasg. in 1910. Devoting himself to the study and practice of public health, he had a distinguished career in the specialty he had chosen. His first appointments were those of resident medical officer of Enfield and Edmonton Joint Isolation Hospital. He then became assistant medical officer of health and school medical officer to Ayrshire County Council, for whom he prepared the annual report of the medical inspector of schools in 1910. His thesis for the degree of M.D., in the same year, was a contribution to the epidemiology of diphtheria, suggesting a mode of treatment of persistent cases of infectivity. On his return to England he was appointed medical officer of health, bacteriologist, and medical superintendent of the infectious diseases hospital under Barnes Urban District Council, and before the war he was medical officer of health and school medical officer for the district of Isleworth and Heston. He was a Fellow of the Royal Institute of Public Health, and he published valuable reports on subjects of hygienic interest. He had been for eighteen months at the front, and was in charge of a mobile hygienic laboratory at the time of his death. He was mentioned on two occasions, to which reference has already been made in our columns, for gallant conduct in the field. His promotion to the rank of Captain took place shortly before his death.

---



WILLIAM WILSON, M.D. GLASG,  
IRVINE.

ON Saturday, 26th August, there passed away in a Glasgow nursing home Dr. William Wilson, who for many years has been a well known and highly respected practitioner in the Ayrshire town of Irvine. He was a man who deserves to be held in remembrance alike for his excellent professional abilities and for his large-hearted generous nature. His forefathers were for many generations farmers in the district of New Cumnock, and he possessed all that vivacity of character and accuracy of observation which generally arise from such an ancestry. Till the end he retained his natural buoyancy and brightness, which so far deceived even his more intimate friends that few of them who were unacquainted with the facts realised that he was within a short space of the three score and ten, or that he was seriously ill. Dr. Wilson never was an old man, even in appearance, and his alertness of manner and intellect rather betokened a man in the prime of life than one who had borne the strain of a medical career for something like forty-five years.

After a preliminary training at the Glasgow High School he studied medicine at the University of Glasgow, which at that time conducted its operations in the very inadequate and terribly dingy premises in the High Street, with clinical instruction at the Royal Infirmary. But although the building itself was entirely out of date and its surroundings deplorable, still its staff was of the brightest quality. In certain of its departments, both in medicine and in other branches of study, the University of Glasgow had men of European fame. In medicine it had Joseph Lister, William T. Gairdner, Allen Thomson; in arts, Edmund L. Lushington and Edward Caird; and in physical science, William Thomson and Rankine. Some of the other teachers in the medical faculty, although not so well known to the outside public, were men of great mark in their several lines of life, such as William M'Kenzie, Harry Rainy, John Easton, and Andrew Buchanan. Dr. Wilson often spoke of three of his teachers for whose memory he retained

till the end of his life his undying regard. These were Lister, William Gairdner, and Allen Thomson. He was in each of their classes a very distinguished student and gained honours. After graduation in 1869 he was offered through Sir William Gairdner the post of physician to the Sultan of Zanzibar, which, however, he declined. He was for a short time an assistant in Bradford. Thereafter he began practice in Lugar, but exchanged that for practice in Irvine, where he worked for forty-two years. For all these years he has been a sort of landmark in the place. Widely known and everywhere held in high respect, from the first he commanded a very large practice amongst all classes of society, and if ever a man befriended the poor of a district, he certainly did in Irvine.

He had many patients of high rank, but to his immense credit, be it said, he gave to the poorest the same conscientious attention that he did to his more fortunate clients. He certainly bore the weight of a huge practice for many long years with scrupulous care and diligence and attention. Nor did he ever allow himself to rust. He contributed little, if anything, to the literature of medicine, but he was a man who studied widely, and who was well acquainted with what was most reliable in the more recent developments of medical science.

Shortly after Dr. Wilson settled in Irvine he was made medical officer of health for the burgh, and we believe he discharged the duties of that office till his death. He also took a warm interest in many public affairs, particularly in volunteering, rising to the rank of Surgeon Lieutenant-Colonel. He was an elder in the Parish Kirk and a Justice of the Peace, and took a personal interest and gave a helping hand to many charitable and philanthropic schemes. His wife, the daughter of Mr. Gray, at one time Town Clerk of Irvine, predeceased him by about a year, and he is survived by two sons and one daughter. His elder son has for some years been associated with him in practice, and his younger is the Deputy Town Clerk of Irvine. Altogether Dr. Wilson was a man of a most friendly, lovable disposition, and he will be missed by a large circle of acquaintances and friends even outside of those who had good cause specially to value him as their confidential and trusted medical adviser.



JOHN MUNRO CAMPBELL, M.B., C.M. GLASG.,  
NEWLANDS.

By the death of Mr. J. Munro Campbell on 7th September Glasgow loses one of the best known and most widely beloved of its medical practitioners, a man who to the most brilliant parts added a tireless energy and avidity for work, and a diagnostic ability that had almost the certitude of an intuition. He was a native of Edinburgh, and came to Glasgow University for the study of medicine. As an undergraduate he was one of the outstanding men of his year, and he took the degrees of M.B., C.M. in 1890, with commendation. But little time was necessary to establish him firmly in the favour of an ever-increasing *clientèle*, and with each succeeding year his practice in Pollokshaws, Shawlands, and the southern suburbs of Glasgow grew by leaps and bounds until it seemed more than one man could cope with. It would, indeed, have been too much for most men, but he never spared himself, and he laid down one piece of work only to turn to another. His inexhaustible energy found time not only for all the demands of his practice, but for a keen interest in and untiring labour upon educational work, recognised in 1914 by his election as a member of Eastwood School Board, to which he gave invaluable service, and on which he acted as convener of the Medical Treatment Committee. His surgical ability found recognition in his appointment as assistant surgeon to the Glasgow Royal Samaritan Hospital, a position which he filled with much acceptance and distinction. He was also a Fellow of the Glasgow Obstetrical Society. With the increasing growth of his practice, the strain of it necessarily grew, and in the last two years it was greatly added to by overwork due to the war. It told at last even upon his apparently endless vigour, and about a month before his death his health completely broke down and he was unable to rally. His loss has been deeply and sincerely felt in hundreds of homes, and the very large concourse of mourners that attended his funeral was a testimony not only to his professional ability, but to the feelings of affectionate regard that followed him wherever he went. He is survived by two sons, both of them in the Army, and one,

a recent graduate of Glasgow, holding a Lieutenant's commission in the R.A.M.C.

---

ROBERT DAVIE TAYLOR, M.D.GLASG.,  
DUMBRECK.

WE regret to announce the death of Dr. Robert Davie Taylor, which took place on 9th September at his home in Dumbreck. Dr. Taylor, who studied medicine at Glasgow University, took the qualifications of L.R.C.P.Ed. and L.F.P.S.G. in 1866, and in 1872 he took the degree of M.D.Glasg. He had been in practice for fifty years, for the most part in the Paisley Road district, and latterly in Dumbreck. For many years he acted as medical officer for Govan parish, and until the last he was parochial medical officer for the western district of Govan Combination. He had an extensive professional connection, and stood high in the respect and esteem of all who knew him.

---

ALEXANDER M'LELLAND, M.B., Ch.B.GLASG.,  
ALEXANDRIA.

WE regret to announce the death of Mr. Alexander M'Lelland, which took place suddenly at his home in Alexandria on 21st August. A student of Glasgow University, he took its degrees of M.B., C.M. in 1871, and in the same year he took the qualification of the Edinburgh College of Surgeons. In 1872 he was house surgeon in the Glasgow Royal Infirmary under Dr. James Morton; and he was also for a time resident medical officer in Greenock Infirmary. Settling in Alexandria he soon made for himself an excellent position. He acquired a large and steadily increasing practice, and his genial and kindly nature made friends of his patients. He held numerous public appointments, being at one time medical officer of health for Bonhill, and holding at the time of his death the posts of parochial medical officer, medical officer to the Post Office, and certifying factory surgeon. He was for long a familiar and respected figure in the district, and his death will be regretted wherever he was known.



## CURRENT TOPICS.

---

### THE GLASGOW MEDICAL SCHOOL.

WE publish the following particulars of the medical curriculum in view of the near approach of the winter session, which opens on the 16th inst.:—

#### UNIVERSITY OF GLASGOW.

The University grants four degrees in medicine. Of these the M.B. and Ch.B. must be taken together.

The following outlines of the regulations for graduation are in accordance with the New Medical Ordinance, which came into operation on 1st October, 1911:—

Before commencing his medical studies, the student must pass the preliminary examination. This comprises (1) English, (2) Latin, (3) Mathematics, (4) An Additional Language, namely, Greek, French, German, Italian, or such other language as the Senatus may approve. In the case of a candidate whose native language is not English, certain modifications may be made in the preliminary examination.

The certificate of having passed the above examination must, along with satisfactory evidence of the applicant having attained the age of sixteen years, be transmitted to James Robertson, Esq., 54 George Square, Edinburgh, so that the intending student may be registered in the books of the General Medical Council. Certain other examinations, or a degree in Arts or in Science from a recognised University, are accepted as exempting from the preliminary examination.

The degrees of M.B. and Ch.B. will not be conferred unless the candidate has been registered in the books of the General Medical Council for at least five years previously. The academical year commences on the first day of October. In each year there is one medical session of not less than thirty teaching weeks. The session is divided into three terms,

two of which are deemed the equivalent of a winter session and one the equivalent of a summer session. Two of the five years of medical study must be spent at the University. There are four professional examinations. Of these, the first comprises Botany, Zoology, Chemistry, and Physics. Candidates are admitted to examination in any of these subjects, after attendance on the prescribed course or courses, at times to be determined by the Senatus. Those who have passed the first professional examination may be admitted to the second (Anatomy and Physiology) after the end of the sixth term (*i.e.*, second year). The third examination (Materia Medica and Therapeutics and Pathology) may be taken after the end of the ninth term (*i.e.*, third year). The final examination is open to those who have passed the third examination and completed the fifteenth term (*i.e.*, fifth year). The examination comprises Medical Jurisprudence and Public Health, Medicine, Surgery, and Midwifery, and the Diseases peculiar to Women and to Infants. Every candidate for the final examination must submit a declaration, in his own handwriting, that he has completed his twenty-first year, or that he will have completed it on or before the day of his graduation. The final examination is, like the other three examinations, held twice yearly—at the close of the winter session and of the summer vacation. Owing to the war, special final examinations may be held for such students as have fulfilled the requirements of the curriculum.

Class fees vary; for the majority of classes the fee is £4, 4s.

Clinical courses are taken in the Western and Royal Infirmarys. Attendance on the classes of the physicians and surgeons in both institutions is recognised for purposes of graduation. In addition to clinical courses, the Professors of Medicine, Surgery, and Midwifery at the Royal Infirmary conduct courses of systematic lectures.

*Women students* are admitted to certain classes in the University buildings. The remainder of the classes are held in Queen Margaret College. The clinical classes are taken in the Royal Infirmary.

The higher degree of M.D. may be taken by anyone who holds the Bachelor's degrees in medicine and surgery, on his



complying with certain conditions. These are: That he must be of the age of twenty-four years or upwards; that he produces a certificate of having been engaged subsequent to having received the degrees of M.B. and Ch.B. for at least one year in attendance in the medical wards of an hospital or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the naval, military, colonial, or public health medical services, or for at least two years in practice other than practice restricted to surgery. The candidate must pass an examination in clinical medicine, and must submit a thesis, for the approval of the Faculty of Medicine, on any branch of knowledge comprised in the second, third, or fourth professional examination for M.B. and Ch.B., excepting subjects which are exclusively surgical. Similarly, the degree of Ch.M. may be obtained by examination in clinical surgery and the presentation of a thesis on a subject not exclusively medical.

Full particulars of courses, fees, dates of examination, &c., will be found in the *University Calendar* (Messrs. MacLehose & Sons), or may be obtained from Albert Morrison, Esq., Registrar, the University.

#### ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

(1) *Triple Qualification* (L.R.C.P.E., L.R.C.S.E., & L.R.F.P.S.G.).—In conjunction with the Royal Colleges of Physicians and Surgeons of Edinburgh, the Royal Faculty of Physicians and Surgeons, Glasgow, grants a licence to practise. This Triple Qualification admits to the *Medical Register*, and those possessing it are eligible for the public services. The course of study and the examinations are similar to those for the University degrees, but the class fees are in many cases lower than those payable in the University. Qualifying courses are held in The Anderson College of Medicine and in St. Mungo's College,\* and particulars may be obtained from the respective Deans. Regulations for the triple qualification may be had from Walter Hirst, Esq., Secretary to the Royal

\* Many of these courses are recognised by the University as qualifying for graduation. For special regulations, see the respective *Calendars*.

Faculty of Physicians and Surgeons, 242 St. Vincent Street, Glasgow.

(2) *Fellowship*.—This fellowship is open to registered practitioners of not less than 24 years of age, and of not less than two years' standing. The candidate must pass an examination in medicine or surgery, and in any one of the following subjects which he may select:—Anatomy, Physiology, Pathology, Midwifery, Diseases of Women, Medical Jurisprudence, Ophthalmic Surgery, Aural, Laryngeal and Nasal Surgery, Dental Surgery, State Medicine, Psychological Medicine, Dermatology. In the case of candidates engaged in connection with the war, an examination in one subject only will be accepted as sufficient, and this privilege will hold good in the case of candidates coming forward within five years of the termination of the war.

Fee, £50; to one who is already a licentiate of the Faculty, £25. If the candidate does not desire to be eligible to hold office, the fees are £30 and £15 respectively.

#### EXTRA-MURAL SCHOOLS.

*The Anderson College of Medicine*.—This school is situated in Dumbarton Road, adjoining the main entrance gate to the Western Infirmary. It provides education in all subjects of the curriculum both for medical and dental students. The classes qualify for the M.B. and the Triple Qualification. Clinical instruction is provided in the Western or Royal Infirmaries.

*St. Mungo's College*.—The school is in the grounds of the Royal Infirmary, Castle Street, and the students, as a rule, attend the clinics in the Infirmary. The classes are recognised by the University. They qualify also for the Triple Qualification.

*Western Medical School* (University Avenue).—This School has been closed for the duration of the war.

#### CLINICS.

*Royal Infirmary* (St. Mungo's College adjoins), 660 beds.—Visit hour, 9 A.M. daily; Outdoor Department, 2 P.M. Fees:—



1. For infirmary attendance, dispensary, &c.—(a) for perpetual ticket, £7; (b) for season tickets—six months, £2, 2s.; three months, £1, 1s. Separate payments for season tickets, amounting in all to £7, 7s., entitle a student to obtain a perpetual ticket in exchange therefor. 2. For clinical instruction—two terms, or six months, £3, 10s.; one term, or three months, £1, 15s. Students who have paid to any other hospital in the United Kingdom or elsewhere the fees necessary to obtain a perpetual ticket for such hospital shall be admitted as students of the Royal Infirmary on payment of a hospital entrance fee of £1, 1s. for attendance for six months and 10s. 6d. for attendance for three months, and where a class for clinical instruction is taken, he shall pay in addition the fees for such instruction as above stated. Vaccination, £1, 1s.; pathology, £4, 4s.; or for University graduation, £6, 6s.; bacteriology, £2, 2s.; practical pharmacy, £1, 11s. 6d. Fees for the above, as well as for all medical classes connected with St. Mungo's College, are payable to the Superintendent of the Infirmary, Dr. J. Maxtone Thom.

*Western Infirmary* (adjoining the University), 580 beds.—Visit hour, 9 A.M. daily; Outdoor Department, 2 P.M. Every student shall pay a fee of £10, 10s. for hospital attendance, and, in addition, £3. 3s. for each winter session, and £2, 2s. for each summer session of clinical instruction. Students who have completed their clinical course elsewhere shall be permitted to enter for a six months' course of the *hospital only* on payment of a fee of £2, 2s. The fees should be paid to the Superintendent, Dr. D. J. Mackintosh, M.V.O.

Students who have obtained certificates of attendance during a course or courses of Clinical Medicine extending over not less than nine months, and who have also obtained certificates of attendance during a course or courses of Clinical Surgery extending over not less than nine months, may take courses of instruction on Clinical Medicine and Clinical Surgery on alternate days.

Students "remitted" from the final examination in both Medicine and Surgery can also adopt the alternate day system for their period of further study (which, in the case of candidates "remitted" at the Spring final examination, includes the full term of six months from May till October).

*Victoria Infirmary* (Langside), 180 beds.—For particulars, apply to the Superintendent, Dr. D. Otto Macgregor.

*Royal Hospital for Sick Children* (Yorkhill), 206 cots.—Visiting physicians and surgeons attend 9.15 A.M. daily.

*Dispensary* or Out-patient Department. Over 12,000 cases treated annually. Physicians and surgeons attend 11.30 A.M.

*Country Branch Hospital* (Drumchapel, Dumbartonshire), 26 cots.

For the clinical instruction of students the year will be divided into three terms. A special course of lectures and clinical instruction on the medical and surgical diseases of children (meeting the requirements of the Medical Ordinance) will be given in each of said terms. The class will meet daily at 11 A.M., and will consist of 15 medical and 15 surgical meetings.

Students attending the hospital in their third year of clinical study will be given every opportunity of taking part in the regular clinical work in the wards under the supervision of the visiting physicians and surgeons.

Hospital fee (admitting to hospital and dispensary for purpose of clinical instruction, and attending said special course, &c.), for one term, £1, 1s.; or for whole year, £2, 2s.; fee for clinical instruction and said special course for one term, £1, 15s. Fees are payable to, and further information may be obtained from, the Medical Superintendent, The Hospital, Yorkhill.

*Eye Infirmary* (174 Berkeley Street, and 80 Charlotte Street).—Hour of visit, 1 P.M. daily. Fee for six months, £1, 1s.; for twelve months, £2, 2s.

*Ophthalmic Institution* (126 West Regent Street).—Hour of visit, 2 P.M. Fee for a qualifying course, £1, 1s.

*Insanity*.—During the summer session, a course of lectures is given in the University, and clinical instruction in the Royal Asylum, Gartnavel. Fee for combined course, £2, 2s.

Dr. Oswald conducts, in addition to the above, a clinic on Incipient Mental Disorders in the Out-patient Department of the Western Infirmary.

At Gartloch Asylum, Gartcosh, senior medical students may obtain appointments as resident clinical clerks. The



appointments are for six months, and those holding them can attend classes in Glasgow in the earlier part of the day. Applications should be sent to the Medical Superintendent, W. A. Parker, M.B., considerably in advance.

Clinical lectures are given at Hawkhead Asylum by Dr. James H. Macdonald, "Mackintosh" Lecturer on Psychological Medicine in St. Mungo's College. Systematic lectures are given at the College as part of the same course.

*Fevers.*—Clinical instruction is given in Belvidere and in Ruchill Hospital. Fee, for a course extending over ten weeks (once a week), £1, 1s. Apply to Mr. James D. Borthwick, 285 George Street, Glasgow.

*Maternity Hospital.*—Clinical instruction in Midwifery is given at the Hospital, and there are exceptional facilities for practical work in the Outdoor Department.

*Gynæcology.*—Clinical instruction is given in the Gynæcological Departments of the Western and Royal Infirmaries.

*Diseases of the Skin, and of the Throat, Nose, and Ear* are taught in the special departments of the Royal and Western Infirmaries. The *Hospital for Diseases of the Throat, Nose, and Ear* (Elmbank Crescent) affords further opportunities for the study of these diseases.

---

APPOINTMENTS.—The following appointments have recently been made:—

W. A. Riddell, M.B., Ch.B.Glasg. (1900), to be District Medical Officer of the Birkenhead Union Infirmary.

*Royal Navy* (26th August): Temporary Surgeon D. M'Alpine, M.B., Ch.B.Glasg. (1913), to *Pembroke*, additional.

*4th September*: Temporary Surgeon R. Tennent, M.B., Ch.B. Glasg. (1914), to *Excellent*.

*Royal Army Medical Corps* (18th August): To be Lieutenant—A. F. Cook, M.B., Ch.B.Glasg. (1916), from Glasgow University O.T.C.

*21st August:* To be temporary Captains—Temporary Lieutenants D. M'Intyre, M.B., Ch.B.Glasg. (1909); J. Green, M.B., C.M.Glasg. (1896); R. W. Valentine, M.B., Ch.B.Glasg. (1901); N. Macleod, M.B., Ch.B.Glasg. (1914); A. Patrick, M.D.Glasg. (M.B., 1908); D. G. Gardiner, M.B., Ch.B.Glasg. (1915); W. W. Galbraith, M.B., Ch.B.Glasg. (1914).

*22nd August:* W. J. Richard, M.B., C.M.Glasg. (1892), to be temporary Honorary Major whilst employed at the Merryflatts War Hospital.

*26th August:* To be temporary Lieutenants—J. Brunton, M.D.Glasg. (M.B., 1898); D. G. S. Gartshore, M.B., Ch.B.Glasg. (1901); D. Penman, M.B., Ch.B.Glasg. (1905); A. H. Muir, M.B., Ch.B.Glasg. (1901); J. M. Anderson, M.B., Ch.B.Glasg. (1915); C. J. C. Macquarie, M.B., Ch.B.Glasg. (1907); W. B. Thomson, M.D.Glasg. (M.B., 1899); J. A. S. Burges, M.B., Ch.B.Glasg. (1910); J. D. S. Sinclair, M.B., Ch.B.Glasg. (1910); J. A. Ure, M.B., C.M.Glasg. (1886); A. Kerr, M.B., Ch.B.Glasg. (1899).

*28th August:* To be temporary Captains—Temporary Lieutenants S. H. Harris, M.B., Ch.B.Glasg. (1910); R. S. Gibson, M.B., Ch.B.Glasg. (1915), B.Sc.; D. S. Campbell, M.B., Ch.B.Glasg. (1915); J. K. Rennie, M.B., Ch.B.Glasg. (1915), B.Sc.; D. M'Farlane, M.B., Ch.B.Glasg. (1915); W. Waddell, M.D.Glasg. (M.B., 1882); J. C. T. Teggart, M.B., Ch.B.Glasg. (1912).

*7th September:* To be temporary Captain—Temporary Lieutenant J. Brunton, M.D.Glasg. (M.B., 1898).

*8th September:* Temporary Captain R. R. K. Paton, M.B., Ch.B.Glasg. (1910), to be local Major whilst employed on embarkation duties. To be temporary Lieutenants—W. Craik, M.B., C.M.Glasg. (1892); J. B. Whitfield, M.B., Ch.B.Glasg. (1909); R. J. Wilson, M.B., Ch.B.Glasg. (1915); E. J. Fitzgerald, M.B., Ch.B.Glasg. (1909); T. S. Forrest, M.B., Ch.B.Glasg. (1910); W. R. Wiseman, M.B., Ch.B.Glasg. (1910), B.Sc.; S. J. Moore, M.B., Ch.B.Glasg. (1901); R. C. Smith, M.B., Ch.B.Glasg. (1902); H. S. Banks, M.B., Ch.B.Glasg. (1913).

*R.A.M.C., Territorial Force (19th August):* Highland Field Ambulance—John Steele, M.B., Ch.B.Glasg. (1916), to be Lieutenant.

*4th September:* Lowland Casualty Clearing Station—J. W. Anderson, M.B., Ch.B.Glasg. (1911), to be Lieutenant.



*13th September:* Scottish General Hospitals. The under-mentioned officers to be seconded for duty with a General Hospital—Lieutenant-Colonel A. G. Hay, M.D.Glasg. (M.B., 1893); Major H. Rutherford, M.B., C.M.Glasg. (1884); Captain A. W. Harrington, M.D.Glasg. (M.B., 1900); Captain D. Watson, M.B., C.M.Glasg. (1891); Captain J. Patrick, M.B., C.M.Glasg. (1893), F.R.C.S.E.; Major H. Walker, M.B., C.M.Ed. (Shawlands); Captain J. D. Holmes, M.B., C.M.Glasg. (1897); Captain J. Henderson, M.D.Glasg. (M.B., 1898); Captain A. Fraser, M.B., Ch.B.Glasg. (1900); Captain J. R. Riddell, F.R.F.P.S.G.; Captain W. Whitelaw, M.B., Ch.B.Glasg. (1912).

WAR HONOURS FOR GLASGOW GRADUATES.—In the *London Gazette* of 25th August it is intimated that His Majesty the King has been graciously pleased to confer the D.S.O. upon temporary Captain Douglas William Hunter, M.B., Ch.B.Glasg. (1901), R.A.M.C., “for conspicuous gallantry in action. He tended the wounded incessantly in the open and in the front line trench under very heavy fire.” Before the war Captain Hunter was in practice in Bradford.

On the same date the Military Cross was conferred upon Captain Joseph Wilkie Scott, M.D.Glasg. (M.B., 1898), “for conspicuous gallantry and devotion to duty in action. He tended the wounded under heavy fire for several hours, and carried back a number of them to our front line at great personal risk.”

In Admiral Sir John Jellicoe’s despatch of 15th September the following Glasgow graduates were recommended for honours for service in the battle of Jutland:—

Fleet Surgeon Henry William Finlayson, M.B., C.M.Glasg. (1887), R.N. “A zealous and hard-working officer, who organised his department in an efficient manner for the action.”

Fleet Surgeon Joseph Agnew Moon, R.N., “was responsible for the excellent medical arrangements for dealing with the wounded in H.M.S. *Benbow*, which were very efficient.” Fleet Surgeon Moon has the qualifications of L.R.C.P. & S.Ed. He studied medicine in the Glasgow Royal Infirmary, where he was house surgeon under Sir William Macewen in 1885, the year of his qualification.

On both these officers His Majesty the King has been graciously pleased to confer the D.S.O.

GLASGOW MEDICAL CASUALTIES.—Since our last issue further casualties have been announced among graduates and students of the Glasgow medical school.

Captain R. D. B. Frew, M.D., R.A.M.C., wounded, is a son of the late Colonel D. Frew, Kilsyth. One of his brothers, also an officer, was recently wounded in France. Captain Frew took the degrees of M.B., Ch.B.Glasg. in 1908, and that of M.D. in 1912. He held the D.P.H. of Victoria University, and before the war he was in practice in Wallasey, where he was tuberculosis officer for the county borough. After graduation he was for a time house surgeon in the Glasgow Royal Infirmary.

Captain R. M'Cowan Hill, D.S.O., R.A.M.C., reported wounded on 26th August, took the degrees of M.B., Ch.B. at Glasgow University in 1906. He is attached to the Argyll and Sutherland Highlanders. The gallantry that brought him his decoration has already been the subject of reference in these columns.

Major J. C. M. Matheson, Argyll and Sutherland Highlanders and Machine Gun Corps, the only son of Mr. D. Matheson, Dennistoun, was seriously wounded on 10th August. He was educated at Hutcheson's Grammar School, and at the outbreak of war was a final year medical student at Glasgow University. He was a member of the O.T.C., and received his commission in August, 1914.

Private William Thomson, Cameron Highlanders, killed in action on 17th August, was the younger son of Mr. W. T. Blakely, M.B., C.M.Glasg., of Kirkintilloch.

Lance-Corporal A. E. Perry, Cameron Highlanders, previously reported wounded and missing, now officially presumed killed in action, 26th September, 1915, was the youngest son of Dr. and Mrs. Perry, Queen's Terrace, Glasgow.

MEDICAL STUDENTS IN THE ARMY.—The following is contained in the Scottish Command Orders of 26th August:—

Medical students now serving with the colours who have been duly registered as such in the books of the General Medical Council, and who were at the time of enlistment actively engaged in medical studies, if not passed fit for general service (Category A) are to be relegated to Class W, Army Reserve, or Class W (T.), T.F. Reserve. Officers commanding



units will forward to Command Headquarters by 2nd September the names of medical students in the above class serving under their command. In the event of any doubt arising as to whether a man is to be regarded as a medical student, he should be required to produce a certificate from the Dean of the Faculty of the college where he was studying. Men thus relegated to the Reserve will be required to return to their professional studies and to enrol in an O.T.C. Where a medical student is holding a commission but is not fit for service overseas, a statement of the case should be forwarded to Command Headquarters for the consideration and decision of the Army Council.

ORTHOPÆDIC TREATMENT AT WOODSIDE HOSPITAL.—The report of the first six months' work at the Orthopædic Department of Woodside Red Cross Hospital, Glasgow, contains interesting particulars with regard to the methods employed and the results obtained. In all, 217 soldiers have received treatment, the conditions dealt with including wounds, contusions, fractures, dislocations, sprains, synovitis, periostitis, rheumatism, myalgia, arthritis, lumbago, sciatica, neuritis, local anæsthesia, &c. The hospital is fitted up with the Dowsing radiant heat and light apparatus, and in addition to the application of these rays patients received massage, remedial exercise, and electrical (faradic) treatment. The majority of the patients have so far recovered that they have returned to their units. Only about 10 per cent have been discharged as unfit for active service, and these were all so far recovered as to be able to use all their limbs.

The Dowsing radiant heat and light apparatus has proved useful in loosening adhesions of joints and constrictions of muscles; reducing callus after fractures and exudations after dislocations; reducing effusions after sprains and contusions; and in relieving pain in painful disease, like rheumatism, sciatica, lumbago, and neuritis. The temperature of the cabinets for local treatment usually attained a maximum of 350 degrees, and of the bed a maximum of 300 degrees. The result of the application of the rays has been very marked redness of the skin due to the dilatation of the subcutaneous

blood-vessels; free perspiration over the whole body, even when the rays were applied only locally; in painful afflictions the pain has been relieved speedily; the body temperature has been raised one or two degrees; the circulation of the blood has been greatly increased; and perspiration has been increased. With regard to the last three results, it has always been found that a few minutes after treatment the pulse, respiration, and temperature have returned to their normal condition. After due precautions, there have been no cases suffering from chills or colds as a result of treatment.

Remedial exercise has been very successful. Many excellent schemes of physical exercise have been drawn up, but these usually predicate a being of normal construction, a subject approximating in physique to the average healthy man. In hospital, however, where the men have not this sound physical constitution (*e.g.*, some defect in the organs of life or a total or partial loss of function in the limbs as a result of disease or wounds), there cannot be the rigid observance of any system but rather of principles. Therefore there has been a very careful diagnosis of each case, and exercises have always been chosen suitable to the capacity of the individual for whom they are intended, gradually increasing in difficulty so as to ensure systematic progress. Exercises have been adapted from the Army manual of physical training, or from the systems of Ling, Schott, Muller, and Sandow, and remedial exercises have been invented to suit the conditions. A large number of apparatus have been installed, including springs, pulleys, weights, wheels, machinery, &c., to exercise muscles and joints. The mental factor has not been neglected, and numerous games have been introduced suitable to each patient. The Schott system of exercise has been used for cases suffering from heart trouble. A system of exercises has been used for cases suffering from lung troubles, including gas cases, and a system has also been used for patients suffering from nerve diseases. Massage and the use of the faradic battery have also contributed to success.

Interesting examples of the results of treatment are included in the report, which forms a striking testimony to the benefit of orthopædic methods in suitable cases.



POSTAGE OF DELETERIOUS LIQUIDS OR SUBSTANCES.—The following regulations of the General Post Office for the postage of articles sent for medical examination or analysis came into force on 21st August, 1916, and are substituted for those printed at page 21 of the *Post Office Guide*:—

“Deleterious liquids or substances, though otherwise prohibited from transmission by post, may be sent for medical examination or analysis to a recognised Medical Laboratory or Institute, whether or not belonging to a public health authority, or to a qualified Medical Practitioner or Veterinary Surgeon within the United Kingdom, by *Letter Post*, and on no account by *Parcel Post*, under the following conditions:—

“Any such liquid or substance must be enclosed in a receptacle, hermetically sealed or otherwise securely closed, which receptacle must itself be placed in a strong wooden, leather, or metal case in such a way that it cannot shift about, and with a sufficient quantity of some absorbent material (such as sawdust or cotton wool) so packed about the receptacle as absolutely to prevent any possible leakage from the package in the event of damage to the receptacle. The packet so made up must be conspicuously marked ‘Fragile with care,’ and bear the words ‘Pathological Specimen.’

“Any packet of the kind found in the parcel post, or found in the letter post not packed and marked as directed, will be at once stopped and destroyed with all its wrappings and enclosures. Further, any person who sends by post a deleterious liquid or substance for medical examination or analysis otherwise than as provided by these regulations is liable to prosecution.

“If receptacles are supplied by a Laboratory or Institute, they should be submitted to the Secretary, General Post Office, in order to ascertain whether they are regarded as complying with the regulations.”

RESEARCH IN BRITAIN AND GERMANY.—There is in a recent issue of *The Scotsman* a striking article examining the results of the Carnegie Trust’s scheme for post-graduate study and research for the eleven years 1903-1914—that is, from the beginning of the scheme to the period immediately before the war. It shows that Carnegie fellows and scholars are free to carry on their researches wherever they may choose to go—

the former without restriction; the latter, provided that they work under adequate supervision. These workers have pursued their investigations during the period in question in most of the European countries, in Ceylon, and in the United States. Since they were free to go to any country where they could work to the best advantage, it is evident that if they did not go abroad in large numbers it was because they could obtain in this country the guidance, opportunities, and material which they required for their researches.

The following table shows the awards of fellowships and scholarships for the period 1903-14, the departments to which these awards belong, and the locality (at home—*i.e.*, Scotland and England—or abroad) in which the researchers carried out their work. The totals for the whole period of eleven years are added:—

Departments.	Awards for the Period 1903-14.	Where they Worked—	
		At Home.	Abroad.
I. Physics, . . .	Fellows, 27	25 (93 %)	2 ( 7 %)
	Scholars, 54	47 (87 %)	7 (13 %)
	Total, 81	72 (89 %)	9 (11 %)
II. Chemistry, . . .	Fellows, 41	32 (78 %)	9 (22 %)
	Scholars, 81	73 (90 %)	8 (10 %)
	Total, 122	105 (86 %)	17 (14 %)
III. Natural History, . . .	Fellows, 19	15 (79 %)	4 (21 %)
	Scholars, 60	50 (83 %)	10 (17 %)
	Total, 79	65 (82 %)	14 (18 %)
IV. Medicine, . . .	Fellows, 68	54 (79 %)	14 (21 %)
	Scholars, 78	67 (86 %)	11 (14 %)
	Total, 146	121 (83 %)	25 (17 %)
V. History, . . .	Fellows, 36	20 (56 %)	16 (44 %)
	Scholars, 72	50 (69 %)	22 (31 %)
	Total, 108	75 (65 %)	38 (35 %)
Totals, . . .	Fellows, 191	146 (76½%)	45 (23½%)
	Scholars, 345	287 (83 %)	58 (17 %)
	Total, 536	433 (81 %)	103 (19 %)

The subject of medicine, in which our readers are more particularly interested, includes anatomy, anthropology, physiology, experimental psychology, pharmacology, pathology, neurology, surgery, therapeutics, and public health.

It will be seen that of the investigators who carried out



their researches in this country, the totals in the various departments (I-V) varied between 89 and 65 per cent of the whole—confining ourselves to science and medicine by excluding history, they varied between 89 and 82 per cent—and that the gross totals for the whole period yield an average of 81 as against 19 per cent in favour of those who worked at home.

Reference to the following table will enable one to see how the numbers and percentages varied from year to year:—

Academic Year.	Fellows and Scholars.	Where they Worked—	
		At Home.	Abroad.
1903-04, . .	22	16 (73%)	6 (27%)
1904-05, . .	36	23 (64%)	13 (36%)
1905-06, . .	44	32 (73%)	12 (27%)
1906-07, . .	54	43 (80%)	11 (20%)
1907-08, . .	46	33 (72%)	13 (28%)
1908-09, . .	53	41 (77%)	12 (23%)
1909-10, . .	50	41 (82%)	9 (18%)
1910-11, . .	51	48 (94%)	3 ( 6%)
1911-12, . .	57	51 (89%)	6 (11%)
1912-13, . .	60	54 (90%)	6 (10%)
1913-14, . .	63	51 (81%)	12 (19%)
Totals,	536	433 (81%)	103 (19%)

From the above it appears that the percentage of fellows and scholars who have worked in this country has been as high as 94, and has never been lower than 64 during the whole of the eleven years. If we confine attention to the five years immediately preceding the war—it is a period during which research work has made great strides in this country—it will be noted that the gross numbers have tended to rise, and that the percentage in favour of home has never fallen below 81. The low percentage of 19, representing the average of those who worked abroad during the whole period, seems to justify the conclusion that the research scheme of the Carnegie Trust would have been a success though it had not been possible for fellows and scholars to go abroad at all.

With regard to the contribution of Germany to this body of research, the number who worked in Germany over the whole period was 49, or 9 per cent of the total, as against 54, or 10 per cent, from all the other foreign countries, and as against 433, or 81 per cent, for this country; and the number was steadily diminishing. Out of the 49, 18 carried on research in medicine, and in the last five years only 5; while in all subjects,

15 out of a possible 281 worked in Germany in the last five years. The writer adds that the researches of those who have gone abroad do not stand out pre-eminently in comparison with those who have worked at home.

COUNTY OF DUMFRIES: ANNUAL MEDICAL REPORT.—The twenty-fifth annual report by the medical officer for the county of Dumfries, Mr. J. M. Ross, is much curtailed owing to the war, and to the fact that the Local Government Board has resolved not to call for the usual reports on health, sanitary conditions, and housing inspection. It is concerned with the year 1915, and is confined to the statistics of births, deaths, and notifications of infectious diseases. The estimated population of the County Landward for 1915 was 40,248, and for the county and six burghs 53,420. The census of 1911 gave a population of 42,567 for the County Landward, and for the county and six burghs 56,814. The births registered in the county districts were 855, and in the burghs 267, the birth-rate for the County Landward being 21·243 per 1,000, and for the county and six burghs 21·103. Of the 1,122 births 1,011 were legitimate and 111 illegitimate. The total number of deaths registered was—for the County Landward, 944; for the county and six burghs, 1,182. The transfers-in were for the County Landward 64, the transfers-out 322; for the county and six burghs the figures were 100 and 330. The transfers-out in the Dumfries district were chiefly from the Crichton Royal Institution, all out-county deaths in which are deducted; in the Annan district they included 199 deaths registered in Gretna as a result of the railway accident at Quintinshill on 22nd May, 1915. The corrected figures are, for the County Landward, 686 deaths—350 male and 336 female; and for the county and six burghs, 953 deaths—463 male and 490 female. These figures do not agree with those of the Registrar-General, the chief difference being in the transfers-out in the Dumfries district, and the difference being largely, though not wholly, due to the refusal of the Registrar-General to transfer furth of Scotland. The result is unfortunate so far as the district is concerned, and vitiates the Registrar-General's results when these are used to contrast the death-rate with that of other districts. The object of transferring deaths is to arrive at a death-rate giving a fairer



idea of the health of the district than one calculated simply on the registered deaths. In the district of Annan, if the deaths due to the Quintinshill accident (199) and other deaths of non-residents (22) had been added to the other registered deaths, the result would have been a death-rate of 39·83 instead of 17·63, or 16·07 if the correction for age and sex distribution is also made. In the district of Dumfries, 78 of the 192 deaths registered occurred in the Crichton Institution, and only 1 of these was a patient from the district. Seventy-seven should have been transferred—22 to other parts of the county, 39 to other parts of Scotland, and 18 furth of Scotland. In addition, there were in other parts of the district 5 deaths of individuals usually residing elsewhere, 2 of them furth of Scotland. This makes 82 for transfer-out. Twenty of these are furth of Scotland, and the Registrar-General retains them, with 8 unexplained, arriving at a death-rate for the district 3·6 per 1,000 in excess of what should be the rate for fair comparison with other districts. The reason given is that as the national statistics are uncorrected for non-resident deaths, if local statistics were so corrected there would be no check on their completeness, and thus great danger of leakage. But the practice of the Registrar-General during the war with regard to the deaths of soldiers in Scotland from wounds or disease contracted abroad is to place them in the national statistics, but not in the local statistics either of the place of death or of the place of residence before the war. They are placed in a category of their own—"the extra county." Mr. Ross has suggested that the same practice might be followed with regard to the deaths of persons usually residing furth of Scotland, but the answer is a *non possumus*.

The crude death-rate for the County Landward is 23·45; corrected for transfers it is 17·04; corrected also for age and sex distribution it is 15·22. For the burghs the corresponding figures vary from 8·66, 9·28, and 9·11 for Sanquhar to 37·31, 36·25, and 27·63 for Lochmaben. The total figures are 22·13, 17·84, and 16·46. The deaths of children under 1 year of age were 101 (62 male, 39 female). The rate per 1,000 births was 90·017, the male infantile mortality being 103·68, the female 74·43. The lowest infantile mortality was in Moffat burgh, 32·26; that in Dumfries district was 94·59; and the highest was

in Lockerbie burgh, 183·67. Among children born in wedlock the mortality was 80·12 per 1,000; among illegitimate children, 180·18.

Six hundred and fifty cases of infectious disease were notified from the five districts and six burghs, and, in addition, 7 cases of measles from the Langholm district. The proportion of cases, other than measles, notified to 1,000 persons living was 12·17. September, October, November, and December were the four months in which the greatest number of cases occurred, the maximum (102) for any month being reached in November.

The report of the tuberculosis officer (Dr. Ritchie) is the subject of brief reference. Of the 134 cases notified 2 were transfers from other districts. The remainder included 89 pulmonary and 43 non-pulmonary cases. Of the 89 pulmonary cases 16 died before or so soon after notification that they were not seen during life. Tubercle bacilli were found in 44 of the remaining 73, showing that active destruction of lung tissue had begun before notification. Sixty were sent to institutions for varying periods. At the end of the year there were 25 shelters in use in varying parts of the county. Of the total number of cases notified 53 were insured under the National Health Insurance Act. The war militated against the work in respect that tuberculous children were not so readily brought to notice, nor child contacts kept under supervision, owing to the suspension of school inspection; that increased prices increased the difficulties of patients; that scarcity of labour induced several patients to undertake unsuitable work, with detriment to their health; and that the building of a sanatorium for the three south-western counties has been indefinitely postponed.

LITERARY INTELLIGENCE.—Messrs. J. & A. Churchill have recently published a new *Gynaecology for Students and Practitioners*, by Dr. T. W. Eden and Dr. C. Lockyer, obstetric physicians to Charing Cross Hospital. A special feature of the book is formed by its illustrations, to the number of 500, drawn for the most part from originals in the Lockyer collection in the museum of the Charing Cross Hospital Medical School.

*Pulmonary Tuberculosis in General Practice*, by Dr. Halliday Sutherland, medical officer to the St. Marylebone Tuberculosis Dispensary, is announced for immediate publication by Messrs. Cassell & Co., Limited.



## REVIEWS.

*Operative Midwifery: A Guide to the Difficulties and Complications of Midwifery Practice.* By J. M. MUNRO KERR, M.D., C.M.Glasg. Third Edition. London: Baillière, Tindall & Cox. 1916. (25s. net.)

WE welcome the appearance of the third edition of this valuable book. Numerous additions have been made to the text, and also to the illustrations, which add to its value. The wide experience the author has had enables him to speak with authority, and with most of his conclusions we entirely agree.

The chapter on Cæsarean section has been considerably altered. The author now advocates closing the uterine wound in three layers. Five silk stitches, which include the whole thickness of the muscular coat, are first put in, then the mucous membrane is co-apted with a continuous catgut suture, the serous coat is stitched in the same way, and, finally, the five deep sutures are tied, but not drawn too tight. We are very doubtful if this will give a sounder cicatrix than the ordinary method. The stitching of the mucous membrane does not seem to be of much use, considering that most of it is shed in the lochial discharges. He also speaks of the possibility of getting a firmer cicatrix by incising the lower uterine segment instead of the main body of the uterus. Curiously enough, in dealing with vaginal Cæsarean section, he says he is not in favour of it at or near full time, because of the injury to the lower uterine segment. Surely there is a contradiction here? If a firm cicatrix cannot be got in the lower uterine segment after a vaginal Cæsarean section, how is it to be got in an abdominal section? We agree with his statement about the vaginal section, but we do not think that the lower uterine segment should be incised in an abdominal section.

The illustrations throughout the book are admirable, but those on Cæsarean section depict the pregnant uterus turned out

of the abdomen. There are a few cases in which this is advisable, but they are very few; but looking at the illustrations one would imagine it was always necessary. We notice that Cameron's method of the use of a pessary to control hæmorrhage in incising the uterus is not depicted, but what might be called a modification with folded swabs is shown. A little acknowledgment of the pioneer work done by Cameron would not have detracted from the value of the chapter.

The opinions expressed throughout the book in regard to the different methods of operating are extremely well balanced, and, speaking generally, we agree with nearly all of the author's conclusions. With regard to the vexed question of craniotomy on a living child we heartily agree that there are a few cases in which it is justifiable, as it means a much better chance for the mother.

The book is a most valuable contribution to obstetrics, and a credit to its author and the Glasgow school.

---

*Yellow Fever Commission: Reports on Questions Connected with the Investigation of Non-Malarial Fevers in West Africa.* Vols. III and IV. London: J. & A. Churchill. 1916. (10s. 6d. and 5s. net.)

THESE two volumes represent a mass of painstaking work carried on latterly under considerable difficulties owing to the withdrawal of many investigators for war service, apart from the fact that the war atmosphere had rendered research, not directly connected therewith, almost impossible.

Volume III deals with the bionomics of *stegomyia fasciata*, the mosquito which is capable of transmitting yellow fever, and details of the experiments which were carried out in order to determine the life history and conditions of growth are given. There is also a report on the discovery of "seidelin bodies" in human blood in England, tending to disprove the view that these are stages of the parasite of yellow fever.

Volume IV is the final report of the Commission. Part 2 deals with fevers other than malaria and yellow fever, and the Commission are of opinion that pappataci fever, typhoid and



paratyphoid fevers, and possibly undulant fever and seven days' fever are met with in West Africa. Part 3 deals with yellow fever. A history of the disease in the West African Colonies is given, as well as its symptomatology and diagnosis. The number of cases diagnosed in the British dependencies has not exceeded sixty in any one year during the last six years. The continuous presence of the disease the Commission consider to be due to endemic foci rather than to its prevalence amongst the native population. The nature of the virus remains unknown.

Suggestions for further research are given, and emphasis put on "the prime importance of a vigorous prosecution of anti-mosquito measures against all mosquito-borne diseases."

---

*Modern Medicine and some Modern Remedies: Practical Notes for the General Practitioner.* By T. BODLEY SCOTT. With a Preface by SIR LAUDER BRUNTON, BART., F.R.S. London: H. K. Lewis & Co., Limited. 1916. (4s. 6d. net.)

THE fruits of the experience of an observant and scientific practitioner, great as their value should be, are for many reasons apt to go ungathered. He has little leisure throughout the greater part of his life, and in his later years, when he is "old and grey and full of sleep," he is little to be blamed if his chief desire is for rest and recreation. All the more praise is due to those who, like Mr. Bodley Scott, have not only brought their experienced wisdom to the service of their patients, but seek to render it profitable to others. As Sir Lauder Brunton's preface very justly indicates—and none of his words of praise is too high for the matter of this volume—the skilled practitioner has in many ways an advantage over the consultant. He sees his cases in their earliest stages, follows them throughout their course, and has an opportunity of observing the effects of the remedial measures he employs which, except in the wards, is denied to his hospital colleague. And when his mind is of the quality of Mr. Scott's, whose *Road to a Healthy Old Age* was a previous index not only of his scientific accomplishment, but of his humanity and culture, much is to be expected from the record of his observations. Nor is that

expectation disappointed in the present volume. The author speaks of disorders of the heart, of arterio-sclerosis, of the therapeutic use of the secretions of the ductless glands, and of the vaccine treatment of bronchitis and bronchial asthma. On all four subjects he has much to say that is of the utmost value, while the method of his presentment is a lesson in thinking at once philosophic and practical. We make bold to say that no reader will rise from the book without finding his knowledge of each subject in some respect enlarged.

---

*The Commoner Diseases: Their Causes and Effects.* By Dr. LEONHARD JONES. Authorised English Translation by WILLIAM H. WOGLOM, M.D. London: J. B. Lippincott Company. (16s. net.)

THIS is really a text-book of morbid anatomy, and throughout the work, which is profusely illustrated, many of the plates being coloured, the end-results of diseased processes are considered. The relation of anatomical alteration to physiological derangement, however, is always kept before the reader, and the significance of pathological changes as the real basis of disease is thus brought out. Throughout the work numerous authors are referred to, and the excellent bibliography contains references to the papers of the authors quoted. In as much as this work deals with pathology from a point of view which is somewhat uncommon, we can confidently recommend it to practitioners.

---

*Handbook of Massage for Beginners.* By L. L. DESPARD. Oxford Medical Publications. London: Henry Frowde and Hodder & Stoughton. 1915. (6s. net.)

MISS DESPARD'S very successful and authoritative *Text-book of Massage* has served her as the model for this smaller *Handbook*, which she has published for the use of those who are studying massage for military purposes, and as an introduction to the theory of the subject for the ordinary student. The book,



however, is not a mere abbreviation of the *Text-book*, but rather a careful selection from its pages, and it omits altogether much that is contained in the larger volume, but requires a longer period of study for its absorption. The *Handbook*, which includes a chapter on medical electricity, will be found very useful for the purposes for which it is intended. Its descriptions are clear, its illustrations abundant and excellent, and it forms a compendium of all that the beginner can be expected to learn of massage without the actual practice of the movements.

---

*Student's Text-Book on Hygiene.* By W. JAMES WILSON, M.D., D.Sc., D.P.H. London: W. Heinemann. 1915. (8s. 6d. net.)

THIS text-book, written by the Lecturer in Hygiene and Public Health, Queen's University, Belfast, is an admirable conspectus of the subject of hygiene, and will prove a very suitable book for medical and other students.

In a short introduction the author reviews the theories of disease now supplanted by the germ theory and enunciates Koch's postulates. The work of Pasteur and Lister is referred to in terms of eulogy.

Chapter II gives a very clear account of infection, immunity, and anaphylaxis. An account of animal parasites is followed by a short chapter on heredity and eugenics, which briefly explains the relation of these to hygiene. The chapter on air contains some pages on climate and meteorology. Soil and water are next dealt with, and under the latter heading the purification of water by storage, sand-filters, mechanical filters, and chemicals is well described. In the chapter on food a synopsis is given of an outbreak of typhus fever investigated by the author and Professor McWeeney. This is here transcribed as it affords a recent and very clearly stated case of the "carrier" problem.

"In a village having a population of 755, and 130 houses, there were 36 cases of enteric fever notified within six weeks in the spring of 1911. The milk-supply was promptly stopped by the medical officer of health after the second notification, the patient in this case being the man who delivered the milk.

This man and his employer, the dairyman, both died from the disease. The source of infection proved to be a dairymaid, who had had an attack of typhoid fever in 1908, and who had been herself infected by a "carrier." This dairymaid entered service at the farm in the middle of November, 1910. Her previous employer contracted typhoid fever during her sojourn at his house. The suspected milk was supplied to 66 houses, with an aggregate number of inmates of 355. Twenty-four houses were infected, and there were 36 cases of enteric fever, giving a morbidity-rate of 10·1 per cent. No case occurred among the 400 people who did not obtain milk from the suspected dairy."

The construction of buildings, and their warming, lighting, and ventilation are suitably and well described. The chapters on disposal of excremental matter and on communicable diseases are specially full and valuable. Not less well written are those on disinfection, prevention of infectious disease, and vital statistics, personal and school hygiene, tropical diseases, and sanitary law.

The whole work is, as we have said, an admirable review at moderate length of the variety of subjects dealt with under the title of hygiene, clearly and ably written and everywhere up to date. The book is well printed on good paper and in good sized type, and the illustrations are excellent. On page 51, line 18, "low" should be "high."

---

*Medical Lectures and Clinical Aphorisms.* By SAMUEL JONES GEE, M.D. Oxford Medical Publications. London: Henry Frowde and Hodder & Stoughton. 1915. (6s. net.)

THOUGH this is a fourth edition, there is a certain crispness about Gee's writings which induces one to return to his books, and we are pleased to see this one being kept before the profession. Most departments of internal medicine come under review, and the fruits of ripe experience are presented in a manner to attract the mental palate.

Appended to the book are some chapters containing recollections of the author by J. Wickham Legg.

Altogether the book can be heartily recommended.



## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

---

EDITED BY ROY F. YOUNG, M.B., B.C.

---

### M E D I C I N E.

#### **Gangrene of the Lung following Artificial Pneumothorax.**

By Edward N. Packhard, Jun. (*American Journal of the Medical Sciences*, June, 1916).—The patient, a man aged 41, had advanced phthisis of the left lung, with cavity formation, and some evidence of involvement of the right upper lobe. Artificial pneumothorax was produced on the left side, nitrogen gas being injected on eight occasions. The reading of the water manometer before operation was  $-3$  to  $-11$  c.m., and the maximum reading obtained after the largest injection (800 c.c.) was  $+6$  to  $+2$ . No improvement followed this treatment. A small quantity of fluid accumulated in the pleural cavity, but it was not thought to be large enough to warrant its removal. Nine days after the last injection he brought up a large quantity of very foul greenish sputum. This expectoration continued, often in very considerable amount, and latterly stained brown with blood, till his death, which occurred three weeks later. The sputum contained acid-fast bacilli, *oïdium albicans*, *staphylococcus aureus*, and a Gram-negative bacillus which produced gas smelling like methane. At the autopsy there were found in the compressed lung several cavities which were lined with a greyish-green sponge-like material, with no evidence of normal lung tissue. Microscopically the chief features of interest were the presence of obliterative endarteritis, and fresh tubercles in the granulation tissue which was scattered throughout the lung. The factors predisposing to gangrene were—(a) Necrotic areas due to endarteritis obliterans; (b) pressure of gas and consequent recoil of lung; and (c) putrefactive organisms. Necrotic areas and putrefactive organisms are frequently found in tuberculosis without gangrene, so the author infers that the pressure of the gas compressing the lung was the immediate exciter of the gangrene. He, however, recognises that the condition is exceedingly rare, as he has found no case recorded in the literature on the subject.—GEORGE A. ALLAN.

**Exophthalmic Goitre.** By W. H. B. Aikins (*New York Medical Journal*, 8th July, 1916).—After dealing with etiology, the author discusses the treatment of the condition at some length, with special reference to radium. This he has found to succeed when medicaments, organotherapy, and Röntgen rays have

failed to produce any effect. Applied over the thyroid, it diminishes vascularity and lessens the secretion of the gland. Reports are given of seven cases so treated, and the results are very encouraging; but unfortunately in most it was combined with some other method of treatment, so that one cannot judge accurately the effect of the radium alone.—GEORGE A. ALLAN.

---

## DISEASES OF THE EYE.

**Ophthalmoscopic Work in a British Base Hospital.** By A. Greenwood, Boston, Mass. (*The Ophthalmoscope*, August, 1916).—The author worked with the Harvard Surgical Unit for three months during the summer of 1915. He saw a number of cases of "trench nephritis." They were thought to be due to poisoning of the drinking water by mercury bichloride; but he regarded them as the result of standing for days in water up to the waist. There was a very marked general œdema on admission, especially of the face. The urine was scanty, and contained a large amount of albumen, a few hyaline and granular casts, with some renal cells and occasional blood cells. There was an extremely rapid subsidence of all symptoms in a warm comfortable bed. No fundus changes were found after the practical subsidence of the general œdema. Six patients examined immediately after admission showed 2 cases of neuro-retinal œdema, 2 cases of optic neuritis, and 1 case of slight œdema of the discs; while the fundi were normal in 1 case, which presented slight general œdema, although the urine was similar to the other cases. After six and a half hours rest in bed and profound slumber there was a marked decrease in the fundus changes. Twelve hours later the first two cases had no neuro-retinal œdema, the next two had slight neuritis, while the fifth was practically normal, and the sixth remained normal. After a further twelve hours there was no fundus disturbance in any of these cases. Subsequent cases showed similar fundus changes if examined immediately after admission. In no case was there the slightest evidence of any degenerative processes.

Meningitis followed nearly all the perforating brain injuries, and was accompanied by optic neuritis; and where the cranial drainage was poor, the resulting increased cerebral pressure was evidenced by choked disc. Most of the cases of perforating and furrow skull injuries came to operation for the removal of depressed inner plates and splinters of bone and the institution of suitable drainage. Repeated fundus examinations showed nothing at first; but in all of those cases, which developed symptoms of meningitis, there was noted a beginning optic neuritis. Sometimes it was discovered before marked meningeal symptoms had developed. Where there were evidences of increased cerebral pressure there appeared a rapid choking of the disc, which would subside as rapidly on the renewal of adequate drainage. So clearly defined were these changes that the surgeons came to depend on the frequent reports of fundus examination for one of their guides as to the necessity for re-opening the cranial wounds for re-establishing the proper drainage. The author describes a few typical cases. One man had a gunshot wound from above the right eye to the upper part of the right occipital region. A double trephining was done, and drainage passed through the brain; but in five days optic neuritis and other



signs of pressure occurred. The re-establishment of better drainage immediately lessened the amount of neuritis, but this had to be repeated several times before the optic neuritis finally subsided.—W. B. INGLIS POLLOCK.

**Notes of some War Wounds of the Eye and Orbit.** By J. F. Cunningham (*The Ophthalmoscope*, August, 1916).—The author gives short notes of a number of cases, seen in the Eye Department in France under the charge of Colonel W. T. Lister. He emphasises the necessity for a thorough and methodical examination. Small scabs may hide the wound of entrance on the lids, brow, cheek, or temple of a foreign body which has passed through or lodged in the orbit or the eye. The sclera, cornea, iris, and lens must all be examined minutely for evidence of the entrance of small particles. The x-rays and the large magnet should always be employed. Bullets or fragments of shells have entered the ear or the opposite side and come to rest in the orbit, without causing any external signs of orbital injury. He has removed a small piece of bone from the deepest layers of the cornea with a Beer's knife. Cordite was removed from a similar position. Small golden grains on the surface of the iris and the lens capsule were believed to be tri-nitro-toluol.

Foreign bodies in the eye are generally magnetic, although they may be feebly so. They are easily removed if lying in the anterior chamber. It is more difficult when they are found in the lens. In one case the foreign body was removed with fine forceps as it was not magnetic, and the lens matter washed out with saline solution. When situated in the posterior part of the eye they may be removed, but occasionally the metal is embedded too firmly in the sclerotic. The mantles of German bullets are made of ferro-nickel and are only slightly magnetic. Foreign bodies may be left in the eye if it quiets down, and prolapses have been properly excised. If the inflammation does not subside, or the eye is blind, no risk should be run. Eyes so badly concussed that there is no perception may recover sufficiently to count fingers, and hasty decisions must be avoided. Uveal prolapse may be excised or replaced, and the sclerotic carefully sutured. In some cases corneal defect may be covered with a conjunctival flap after iridectomy. Large foreign bodies have been found in the fornices of the conjunctiva. Ruptured globes are generally beyond recognition. The globe may be destroyed behind while intact anteriorly. Small fragments retained in the eye frequently give rise to panophthalmitis. In one case portions of wood were removed from the orbit, due to a shell exploding in a dug-out. The eye was removed, leaving a small scleral frill round the optic nerve. The author urges the "scleral frill operation" when the sclera is split into ribbons, and when wounds of the eye are complicated with orbital cellulitis or panophthalmitis, and in no such case has septic meningitis followed the excision of the eye. X-ray photographs should be taken in all these cases in order to discover any foreign body in the orbit which could be removed at the time of the operation. Foreign bodies in the orbit are tolerated extremely well, provided there is no orbital cellulitis due to infection. Hot fomentations bring about the subsidence of the initial swelling, while searching for the foreign body may cause proptosis, and lead to ulceration of the cornea and loss of the eye. Neuro-pathic ulceration of the cornea has been seen after severe concussion of the orbit, due to interference with the ciliary nerves. Suturing the lids may be necessary.—W. B. INGLIS POLLOCK.

## CLINICAL PATHOLOGY.

**Tetanus.**—C. H. Browning, writing in the *British Journal of Surgery* (vol. iv), says it is of practical importance to know that Kitasato found steam at atmospheric pressure kills the spores of the tetanus bacillus in five minutes; 5 per cent carbolic acid required fifteen hours; 5 per cent carbolic acid + 5 per cent hydrochloric acid required two hours; 1 to 1,000 corrosive sublimate required three hours; 1 to 1,000 corrosive sublimate + 5 per cent of hydrochloric acid required half-an-hour. Recent pathological work has shown that the site of wounds which most commonly gave rise to tetanus is first in the legs and then on the arms, and that tetanus rarely complicates wounds on the thorax. Apart from wounds, the tonsils, carious teeth, pneumonia, and the genital tract in women who develop tetanus shortly after parturition, have all been found to be avenues of infection.

Natonek has also observed tetanus in such injuries as simple fractures and hæmatoma where there was no solution of continuity of the integuments. In cases where there has been a long incubation period, the question has been raised as to whether the wound has been infected with tetanus subsequent to the time of infliction. Noetze's experiments would seem to show that when once a raw surface has been covered by granulation tissue, infection is extremely unlikely to occur. He made the following experiment:—

Subcutaneous wounds were made in sheep, kept open by gauze packing, without aseptic precautions. When the surfaces were covered by granulation tissue, in the secretion from which staphylococci were present, a very virulent culture of *B. tetani* was poured into the wound, which was then packed with gauze soaked in the culture. All the four animals treated in this manner remained alive and well.

During the course of the present war, Nividére observed that operative procedures on a wound were followed in a number of cases by tetanic symptoms in twelve to forty-eight hours, which strongly suggests that granulation tissue, in correspondence with its protective properties in general, seems to afford an almost insuperable barrier to the entrance of the *B. tetani* or its toxins. Males are most commonly affected, even in civil life, and while sporadic cases are the rule, a common source of infection may lead to a series of cases; but there is no definite evidence to show that any individual exhibited marked difference in susceptibility to the implantation of tetanus in contaminated wounds.

Dehne, Hamburger, Aschoff, and Robertson failed to find any notable amount of antitoxin in the blood of normal individuals, which would thus indicate that the natural immunity to the toxin is either common or well marked in the human subject.

*Symptoms.*—The severity of the muscular spasms may be appreciated from cases recorded by Anders and Morgan, who have seen the spinous processes of the vertebræ fractured, and the teeth crushed down to their roots. Goldscheider says that the superficial and deep reflexes are greatly increased, and that he has frequently observed the Babinski phenomenon. In a certain number of cases the spasm is confined to the muscles of the injured limb. This is well seen, when in narcosis the injured limb remains stiff although the other members are



relaxed, and on recovery the spasm disappears last from the injured limb. Rose was the first to emphasise that in wounds occurring in the area of the facial nerve there is a certain amount of facial paralysis. Davis has also noticed the tendency to improvement followed by exacerbation of the symptoms about the third or fourth day. Green vision has also been recorded.

Death is frequently due to asphyxia, exhaustion, and cardiac failure. Marked elevation of the pulse-rate is a very unfavourable sign. Death is often heralded by an apparent improvement accompanying an inexplicable hyperpyrexia.

*Mortality.*—Generally speaking, the longer the incubation period the lower the mortality. Taking Permin's and Fabre's series of 199 cases, the mortality is as follows:—

Incubation of 10 days or less.	94 cases.	Deaths, 94·7 per cent.
„ over 10 days.	57 „	70·2 „
„ unknown period.	48 „	58·3 „

Thus the average mortality is 79 per cent.

*Premonitory Symptoms.*—Evler, who has suffered from tetanus himself, gives the following list of early symptoms:—

A day or so after the infection there may be general restlessness, changing suddenly to a desire to rest; sleeplessness, with distressing dreams, and, it may be, nightly delirium; difficulty in micturition, due to spasm of sphincter vesicæ, which may last from a few minutes to half-an-hour; temporary giddiness, violent headache, excessive yawning; the facial appearance changes and the patient looks anxious, though there is no risus sardonicus yet; there may be trembling of the tongue, which is put out to one side; there is often a profuse sweating, and darting pains in various parts may occur. The patient may have a feeling of chilliness, and there may be some swelling, without redness locally, of the injured member, and throbbing of its arteries, notwithstanding that the limb is raised. Slight jerking may follow pressure on the flexor tendons, and these muscles may be noticed to be in a condition of increased irritability.

If symptoms such as these are present, with a history of possible infection with the tetanus bacillus, Evler considers that the administration of serum is justified. The later symptoms include increased flow of saliva; reflex cramps of œsophagus; ocular symptoms, *e.g.*, nystagmus, strabismus; ear trouble and spasmodic cough; tremors and clonic spasms, which are not painful, and which may not attract attention; pain persisting after muscular contraction induced by effort.

*Experimentally*, it is believed that the local muscular spasm of ascending tetanus is due to the action of the toxin on the related segment of the spinal cord, the toxin reaching the cord by passing up the muscular nerves. As a result, the anterior cornual cells of the cord are irritated by the toxin, giving rise to increased muscular tonus. The precise mode of introduction in the nerve has not been decided, thus Marie, Morax, Meyer, and Ranson consider that the axis cylinder is the conductor. Field, Aschoff, and Robertson believe that the toxin ascends in the neural lymphatics.

*Prophylactic treatment.*—As soon as possible after the infliction of a wound 500 to 1,000 U.S.A. units should be injected. A U.S.A. unit of tetanus antitoxin is ten times the least quantity of serum which is required to preserve the life of a 350 gram guinea-pig for ninety-six hours, when mixed with the official test quantity of standard toxin (100 minimum lethal doses) injected subcutaneously.

The scheme of treatment which Parke and Nicol have followed has been:—Inject as soon as possible 3,000 to 5,000 U.S.A. units intraspinally after lumbar puncture, diluting the serum with normal sterile saline, and introducing the volume of 10 or 15 c.c. according to the age and the amount of cerebro-spinal fluid withdrawn.

If there has been a dry tap, inject only 3 to 5 c.cs.

The fluid is to run in by gravity while the patient is anæsthetised. At the same time, 10,000 to 15,000 units are given intravenously. Three or four days later a similar amount is injected subcutaneously. Intraspinial injections are to be given at intervals of twenty-four hours, and Doyen recommends that the patients be kept with the head of the bed lower than the foot, at an angle of 45°, for ten hours following each injection.

This treatment is even immediately followed by a temporary exacerbation of the symptoms, followed by improvement. By this method Doyen has reported 21 recoveries out of 24 cases; 13 of those cases had an incubation period of ten days or less, and 10 of these lived.

Nicol reports 16 recoveries out of 20 patients, 9 of whom had an incubation period of ten days or less, and 6 of these recovered.—WILLIAM J. MOORE.

---

---

*Books, Pamphlets, &c., Received.*

Laboratory Manual in General Microbiology, prepared by the Laboratory of Bacteriology, Hygiene, and Pathology, Michigan Agricultural College. First edition. London: Chapman & Hall, Limited. 1916. (10s. 6d. net.)

The Mentally Defective Child, by Meredith Young, M.D., D.P.H., D.Sc. With illustrations. London: H. K. Lewis & Co., Limited. 1916. (3s. 6d. net.)

Studies in Blood-Pressure, Physiological and Clinical, by George Oliver, M.D. Lond., F.R.C.P. Edited by W. D. Halliburton, M.D., F.R.S. Third edition. London: H. K. Lewis & Co., Limited. 1916. (7s. 6d. net.)

Transactions of the American Surgical Association. Vol. XXXIII. Edited by John F. Binnie, M.D. Philadelphia: William J. Dornan. 1916.

The Essentials of Histology, Descriptive and Practical, for the Use of Students, by Sir Edward A. Schäfer, M.D., Sc.D., LL.D., F.R.S. Tenth edition. London: Longmans, Green & Co. 1916. (10s. 6d. net.)

Anatomy, Descriptive and Applied, by Henry Gray, F.R.S. Nineteenth edition. Edited by Robert Howden, M.A., D.Sc., M.B., C.M. Notes on Applied Anatomy, revised by A. J. Jex-Blake, M.A., M.D., F.R.C.P. Lond., and W. Fedde Fedden, M.B., M.S., F.R.C.S. With 1,143 illustrations, of which 499 are coloured. London: Longmans, Green & Co. 1916. (32s. net.)

Yellow Fever Commission (West Africa). Reports on Questions connected with the Investigation of Non-Malarial Fevers in West Africa. Vol. III. London: J. & A. Churchill. 1916. (10s. 6d. net.)

Yellow Fever Commission (West Africa). Fourth and Final Report. London: J. & A. Churchill. 1916. (5s. net.)



GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDED 23RD SEPTEMBER, 1916.

	WEEK ENDING			
	Sept. 2.	Sept. 9.	Sept. 16.	Sept. 23.
Mean temperature, . . . .	52·4°	57·0°	51·6°	51·0°
Mean range of temperature between highest and lowest,	3·8°	9·5°	9·7°	10·0°
Number of days on which rain fell, . . . . .	4	3	4	4
Amount of rainfall, . ins.	0·30	0·29	0·11	0·26
Deaths (corrected), . . . .	312	298	289	313
Death-rates, . . . . .	14·9	14·2	13·8	15·0
Zymotic death-rates, . . . .	0·4	0·7	0·6	0·4
Pulmonary death-rates, . . .	2·1	2·1	1·6	2·3
DEATHS—				
Under 1 year, . . . . .	76	83	73	82
60 years and upwards, . . .	72	72	66	77
DEATHS FROM—				
Small-pox, . . . . .	...	...	...	...
Measles, . . . . .	4	7	4	1
Scarlet fever, . . . . .	1	4	1	1
Diphtheria, . . . . .	2	3	3	2
Whooping-cough, . . . . .	...	2	4	3
Enteric fever, . . . . .	2	...	1	1
Cerebro-spinal fever, . . . .	1	3	2	3
Diarrhoea (under 2 years of age),	51	45	36	60
Bronchitis, pneumonia, and pleurisy, . . . . .	29	27	19	37
CASES REPORTED—				
Small-pox, . . . . .	...	...	...	...
Cerebro-spinal meningitis, . .	7	4	1	1
Diphtheria and membranous croup, . . . . .	11	30	26	35
Erysipelas, . . . . .	15	24	19	17
Scarlet fever, . . . . .	65	69	81	90
Typhus fever, . . . . .	...	...	...	...
Enteric fever, . . . . .	3	9	6	4
Phthisis, . . . . .	39	45	52	41
Puerperal fever, . . . . .	1	2	5	3
Measles,* . . . . .	35	37	52	59

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

---

No. V. NOVEMBER, 1916.

---

ORIGINAL ARTICLES.

---

SOME EYE SYMPTOMS AND THEIR INTERPRETATION.

By ARTHUR J. BALLANTYNE, M.D.,  
Surgeon to the Glasgow Eye Infirmary.

By the term eye symptoms one means those subjective experiences which, whether they are located in the eye or not, are believed by the patient or his medical attendant to point to ocular defect or disease. These symptoms are met with in great variety, and are often presented to us in such puzzling forms, that a proper appreciation of their meaning is not always easy. Skill in the application of clinical methods and in the use of diagnostic instruments may be acquired in a comparatively short time, but only experience based on a large number of cases can teach one to estimate correctly the significance of the patient's statements, and to make them what they should be—a guide to the direction of our objective investigation, and an aid in the interpretation of its results.

It is of special importance to the general practitioner to be able to appreciate the relative importance and significance of



the subjective complaints of his patients, for limitations of time and opportunity make it impossible for him to carry out in each case the thorough investigation which is essential to a correct diagnosis, and he is constantly beset by two dangers—on the one hand that he may think lightly of some complaint which seems trivial, but which in reality points to some serious malady whose early recognition and treatment is essential, and on the other hand that he may cause unnecessary alarm by making too much of a trifling symptom.

One of our difficulties lies in the tendency of some patients to magnify, and of others to suppress or belittle, their sensations, and here an intimate knowledge of the patient will no doubt enable the practitioner to gauge with some degree of accuracy the gravity of the symptoms complained of. But it is not only that temperamental differences cause one patient to exaggerate and another to minimise the symptoms of a given disorder. There are undoubtedly less obvious physical or physiological factors which wield a similar influence. In no direction can this be so easily illustrated as in ophthalmology, where one may see, for example, a certain error of refraction accompanied by moderate local symptoms in one case, while in another it causes irritability and other phenomena almost amounting to an alteration of character, the symptoms in both cases being equally relieved by the appropriate optical treatment. This is a subject of perennial interest to the oculist, for, familiar as he becomes with eye-strain in its varied aspects, he cannot but be surprised from time to time at the relief obtained by the correction of very slight defects. He discovers that there is no kind or amount of optical error which is “not worth correcting” when symptoms which may be ocular are present, and he is equally familiar with the disappointment of negative results in the very cases where the defect was palpable, and “glasses” seemed to offer the prospect of a speedy cure.

It will be convenient to consider the subject of eye symptoms under three heads—

1. Pain and other forms of ocular discomfort.
2. Disturbance of vision.
3. Extra-ocular symptoms referred to the eyes.

Although symptoms of all these groups may be present in combination we shall take each in turn.

## PAIN.

One naturally tries, at the outset, to ascertain the character and seat of the pain. There is no appeal from the patient's description of the character of the pain—burning, stabbing, boring, throbbing, &c.—but for reasons already suggested his statements are not always a sure guide to its severity; and, since his knowledge of ophthalmic anatomy is usually elementary, it is not surprising that his views as to the seat of the pain are often misleading. There are, however, two types of pain which are usually clearly understood by the patient and his physician, and which should always be enquired for, namely, the *foreign body sensation* and *ocular neuralgia*.

When pain is described as suggesting the presence of sand or a foreign body in the eye, it may usually be taken to mean a lesion of the conjunctiva or cornea. It is seldom referred to in such diseases as iritis, cyclitis, or glaucoma. The neuralgic type of pain, referred to the eyebrow, temple, or malar region, is one of the characteristic signs of glaucoma and of the inflammations of the iris and ciliary body, and should direct one's attention to the possible presence of such conditions; but neuralgia may have a different interpretation. It is often complained of in purely corneal affections, especially such as involve only the epithelium and more superficial layers of the corneal stroma—abrasions and the various types of vesicular keratitis, for example; but in these circumstances lachrymation and tenderness of the eye on exposure to air and light (so-called photophobia) are usually much more pronounced than in the affections of the iris and ciliary body.

If the instillation of a few drops of cocaine relieves the pain the latter is almost certainly corneal or conjunctival, and the anæsthetic will at the same time allay the photophobia and permit the cornea to be examined. Since it is the more minute and superficial lesions of the cornea which are most likely to cause the symptom in question, a casual inspection will often overlook the source of the trouble. Careful observation of the image of a window as it falls upon the different regions of the cornea may reveal one or more minute breaches in the epithelium, and in many cases the staining reaction produced by the introduction of a drop of fluorescein solution will give



invaluable information of the presence of the lesion, as well as with regard to its position and extent. Focal illumination of the eye, and the use of a magnifying lens, should always be employed when possible.

These remarks apply especially to those cases in which circumorbital neuralgia is associated with hyperæmia and other signs of local disease, namely, acute conjunctivitis, acute glaucoma, acute irido-cyclitis, diseases and injuries of the cornea, &c. The neuralgic character of the pain will either be referred to by the patient or admitted on enquiry, and is a helpful point in arriving at a diagnosis.

In the majority of cases in which ocular neuralgia is complained of in the *absence* of injection, photophobia, and lachrymation, the cause is to be sought for in an error of refraction; but it has not always such a simple explanation. It should not be forgotten that a neuralgic pain, usually intermittent and of moderate degree, is one of the early warnings of simple or chronic glaucoma. One sees it sometimes also as the precursor of an attack of herpes zoster in the area of distribution of the trigeminal nerve. The Gasserian ganglion itself is affected in these cases, and, besides the eye pain and the circumorbital neuralgia, there is often a deep-seated unilateral headache. The first indication of the cause of the headache and neuralgia is the appearance of a few red spots or of a red sinuous line on the skin of the forehead, the cheek, or the nose, which soon develops into a crop of herpetic vesicles. If the eye itself is the seat of severe pain, which is most likely to be the case when there is involvement of the ophthalmic division of the nerve, the cornea should be carefully examined for the presence of vesicles or the ulcers which result from their rupture.

Another type of ocular pain, which is rather orbital in its apparent situation, is the sensation of *the eyeball being too large for the socket*. It is perhaps typically met with in some of the forms of deep scleritis, tenonitis, and the early stages of orbital inflammation. When a pain of this character is associated with conjunctival hyperæmia, it would suggest that one is dealing with one of these affections rather than with the less troublesome alternative of acute conjunctivitis. The complaint is not a common one in the absence of inflammatory signs—in cases of eyestrain, for instance—but I have met with it recently

in a case of latent deviation (hyperphoria), and as it was relieved by the use of a prism the relation of the motor error and the symptom was probably that of cause and effect.

Still another form of deep-seated pain is met with in acute retrobulbar neuritis. This affection is not at all common, being occasionally met with in multiple sclerosis, as a consequence of inflammation of the sphenoidal sinuses, or as a toxic affection. It is unaccompanied by any outward evidence of disease, and even ophthalmoscopic examination may detect little that is abnormal; but the patient complains of dimness of vision and a *deep orbital pain*. The dimness is found to be due to a central scotoma in the field of vision, characteristic of retrobulbar neuritis; but even without this the diagnosis amounts almost to a certainty if the pain is experienced only when the eye is moved suddenly from side to side, or elicited by pressing the eyeball backwards into the orbit.

As I have already stated, if the patient describes his pain as resembling that due to the presence of a foreign body, or if the eyes feel as if full of sand, we are in all probability, assuming that examination has excluded the presence of foreign matter, dealing with a superficial affection of the cornea or conjunctiva or both. In cases where there is a strictly localised corneal lesion, such as a small ulcer or abrasion, the friction of the upper lid on the eroded or abraded area causes a stinging sensation exactly resembling that caused by a foreign body beneath the upper lid. In simple acute conjunctivitis, on the other hand, the sensation is rather one of heat or burning, or, when there are multiple small lesions of the corneal epithelium, a feeling as if the eyes were full of sand; the latter sensation is also rather characteristic of the more chronic types of conjunctivitis, and is typically met with in the so-called angular conjunctivitis caused by the Morax-Axenfeld diplobacillus. It is interesting to contrast the acute forms of catarrhal conjunctivitis with the more chronic types, especially the angular form just referred to. In the former the objective signs predominate, while subjectively the patient seldom experiences anything more than a general feeling of heat and discomfort. In the chronic form, on the other hand, the subjective disturbance is out of all proportion to the clinical signs. Many a patient suffering in this way complains bitterly of smarting, burning, itching,



cutting pain, who has nothing to show for it but a moderate hyperæmia of the palpebral conjunctiva, plica, and caruncle.

*A change in the character or seat of the pain* in the course of an eye affection may lead the practitioner astray or cause him to doubt his diagnosis, whereas, if properly understood, it should be an aid to diagnosis and a guide to treatment. Two experiences of this kind which are fairly common result from the complications which may arise in the course of an attack of conjunctivitis. In the one case the patient, who has suffered for a variable period from the characteristic hyperæmia, secretion, and discomfort of a catarrhal conjunctivitis, suddenly experiences a great increase of pain in the eye. This will almost certainly be found on examination to signalise the occurrence of a corneal ulcer, a not infrequent complication of catarrhal conjunctivitis. In many cases no modification of the treatment is demanded, but if cocaine is not already a constituent of the local applications, its addition will afford great relief, while in some cases topical treatment of the ulcer by iodine, zinc sulphate, optoquin, &c., may be called for. One is tempted to bandage the eye in such a case, since every movement of the lid aggravates the pain, but in the presence of a conjunctival catarrh bandaging must be avoided. The other transformation to which I have referred is the addition of a neuralgic element to the pain or discomfort of a catarrhal conjunctivitis. This will be found to result from hyperæmia of the iris, if not an actual iritis, resulting from the absorption of toxins from the conjunctival sac. The iris, if naturally light in colour, may be found discoloured, the pupil will be small and relatively inactive, and the application of a mydriatic may reveal the presence of posterior synechiæ. This complication is, of course, an indication for the addition of atropine to the local applications, a measure which will contribute greatly to the patient's comfort and hasten his recovery.

Still another example might be given of a change in the character or severity of pain in the course of an eye affection. I refer to the onset of secondary glaucoma, which is often suggested by the addition of severe neuralgic pain, and confirmed by rise of the ocular tension and by congestion of the ciliary vessels. There are many circumstances in which this may occur, but it is perhaps most commonly seen in the course

of some inflammation of the cornea, conjunctiva or iris and ciliary body in a middle-aged or elderly patient where atropine is being employed. This complication should always be watched for in such cases, as its occurrence calls for an immediate revisal of the treatment.

*Shooting or stabbing pains* in or about the eye are occasionally complained of. A pain of this nature is seldom symptomatic of any of the more serious intra-ocular affections. It may indicate the presence of a foreign body, and is sometimes complained of in the more superficial forms of scleritis; but it is worth remembering that a pain of shooting, stabbing, or stinging character is often the first evidence of the onset of a sty, and may be experienced even before there is definite redness or other outward sign. Both at this stage, and later, when the strictly local character of the lesion is concealed by the widespread swelling and redness of the lids, palpation forms a valuable aid to diagnosis. If the finger is passed gently along the lid margins it will meet a little firm nodule, and the patient will wince at the pain caused by contact with the tender focus.

We come now to the large and varied group of symptoms generally described under the name of *asthenopia*, or popularly as *eyestrain*. There is scarcely any variety of ocular pain or discomfort, whatever its character, its position, or its severity, which may not be excited by eyestrain. It is not to be supposed that in every case the muscular, accommodative, or retinal strain is the sole cause of the symptoms; but if the results of treatment may be taken as an indication of causation we have abundant proof that pains of widely differing kinds, ocular, retro-ocular, circumorbital, or neuralgic, shooting, stabbing, or burning, tenderness of the eyes to pressure, a sensation as of the presence of sand in the eyes, and many others, may all proceed from defects of accommodation or of ocular balance, or, more rarely, from retinal fatigue. This fact should always be kept in mind, and no ophthalmic examination is complete, certainly a negative verdict in the presence of ocular pain is never justified, unless an estimation of the refraction and the oculomotor balance has been made. In this connection three important facts are apt to be overlooked, which are very familiar to the specialist, namely, that



the severity of the ocular symptoms is not in direct proportion to the grossness of the optical defect, that pronounced asthenopia is not always accompanied by a correspondingly great defect of vision, and that the possession of perfect visual acuity at all distances does not exclude the possibility of eyestrain. As a matter of fact the smaller errors of refraction, especially where there is astigmatism, are often the cause of most distressing symptoms, and some of the most satisfactory results in the fitting of glasses are given in those very patients who are most reluctant to seek their aid, namely, those who suffer from many of the consequences of eyestrain, but knowing that they have excellent vision at all distances, find it difficult to believe that their eyes can be at fault. It seems that in these cases the error is so small that the reflex mechanism of the iris and ciliary muscle is able to maintain a constant sharpness of focus, but does so at the cost of fatigue symptoms, while in other cases where the error is greater all such unconscious efforts to maintain clear retinal images prove futile and are abandoned, the result being dimness of vision, but with freedom from pain.

It is obvious, then, that neither the statement of the patient that the vision is perfect nor a negative result from actual tests at the types is sufficient to set aside the possibility that the ocular pains are due to eyestrain, and the same remark applies to headache. When the error is small it may be difficult to detect even by objective methods, and when found may seem to be within physiological limits; but even if the relation between the refraction condition and the symptoms only amounts to a possibility, the prescription of glasses is justified, for the treatment can be tried without difficulty, and proof of the correctness of the diagnosis will often be afforded by the satisfactory results obtained by the wearing of glasses.

It has been suggested above that an error of refraction may be only one of several factors in the etiology of asthenopia. It is a familiar fact that the debility resulting from illness, from pregnancy, or from the strain of lactation, may be accompanied by asthenopic symptoms, even in emmetropic eyes, but, of course, more readily in the presence of ametropia. It is chiefly the smaller degrees of hypermetropia and astigmatism which manifest themselves for the first time

under such circumstances. Or it may be that the patient is approaching the presbyopic age, and there is, as it were, an anticipation of the troubles due to presbyopia. The rational line of treatment in all such cases is, of course, to prescribe the appropriate glasses along with a course of tonic treatment, and it will often be found, especially when we are dealing with a small amount of simple hypermetropia, that when bodily health has been restored the wearing of glasses can be discontinued.

If asthenopia and headache should always raise in one's mind the question of treatment by means of glasses, this is particularly true in the case of patients who are approaching, or have already reached, the age of forty years. The average man or woman who has been blessed with perfect vision is very reluctant to admit that he or she has arrived at the necessity for wearing glasses, even although there are symptoms pointing in that direction.

I have been impressed by the frequency with which eyestrain at the presbyopic period manifests itself in the form of a chronic conjunctivitis or blepharitis. The patient complains in the first place of ocular discomfort variously described as heat, smarting, soreness, dryness, sometimes watering and tenderness to light, symptoms which may be caused equally by chronic infective conjunctivitis or by eyestrain. He resorts to the use of boracic or other eye lotions, with temporary relief, but hyperæmia of the conjunctiva and lids becomes more and more marked, a catarrhal secretion is formed, and the patient comes to suffer from a true chronic blepharoconjunctivitis. In a certain proportion of these cases examination of the secretion will discover the Morax-Axenfeld diplobacillus, the organism of "angular" conjunctivitis, and this discovery may lead one astray, for, finding a bacterial cause sufficient in itself to account for the objective and subjective conditions, one may be tempted to rely entirely on local treatment. This will certainly relieve the symptoms, but it will not work a cure. It is essential in all cases of conjunctivitis after the age of forty, and in many at an earlier age, to combine optical and medicinal treatment if a permanent cure is to be obtained. The proper procedure is to give all possible rest to the eyes, and to treat the conjunctivitis by



local measures until the eyes are sufficiently well to allow a reliable measurement of the refraction to be made. The habitual wearing of correcting glasses, combined with continued local treatment, will lead to a cure such as neither of these measures alone would have brought about.

### DISORDERS OF VISION.

The first question which arises when one is presented with a complaint of dimness of vision is whether this is a symptom of an error of refraction or an evidence of organic ocular disease. Needless to say, there is no criterion by which this point can be settled without a thorough ophthalmic examination; indeed, both kinds of trouble may be present; but some simple principles are worth bearing in mind.

In the first place, let it be again pointed out that one should never accept, without confirmation, the patient's statement regarding the state of his vision. This must always be confirmed or checked by whatever tests are available. It is especially important to ascertain the visual acuity of each eye singly, for a remarkably large number of persons who have relatively poor vision in one eye go through life unconscious of the fact.

If a patient complains of dimness of vision, a few simple tests with near and distance test types may help one to put a proper interpretation on the symptom. If the eye under examination cannot read all the letters of Snellen's six-metre test types at six metres, but can read the smallest book print at its own reading distance, myopia is almost certainly the cause of his complaint, and if the degree of myopia is high the patient will require to hold the printed page very close to his face in order to render the print legible. If, on the other hand, the patient can decipher the smallest letters of the distance test types, but has difficulty or a sensation of strain in making out small print at reading distance, hypermetropia or presbyopia is the cause. In hypermetropia, or long sight, even distance vision may be faulty, but this is chiefly seen in hypermetropes who are approaching or have reached the presbyopic period. In any case it will be found that the visual difficulty or strain will increase as the test object is brought closer to the eye.

Astigmatism, whether hypermetropic or myopic, tends to produce dimness of vision at all distances, and it is rather characteristic of the lower grades of astigmatism that, while the patient may read all the letters of the distance types, the last few lines contain many mistakes. The characteristic phenomenon of astigmatism, namely, the differing clearness of lines placed in different meridians, is seldom spontaneously complained of by patients.

The dimness of vision associated with errors of refraction is due to the formation of diffusion circles instead of point images on the retina. By looking through a pinhole opening in a card or metal disc the number of these diffusion circles can be reduced, and the definition of the retinal images improved. Hence, if dimness of vision can be improved by looking through such a pinhole or stenopœic opening, it is almost certainly due to an error of refraction. The same indication is often obtained in a very simple way, by noting that the patient, usually a myope, consciously or unconsciously improves his vision at the distance types by narrowing the palpebral fissures. The resulting expression is characteristic of myopia, and is, indeed, the clinical phenomenon from which the name myopia is derived. It contrasts strongly with the aspect of the patient whose vision is defective from optic atrophy or glaucoma, and whose efforts to make out the types are accompanied by a staring of the eyes with wide palpebral fissures.

These suggestions are merely offered to show how the nature of the case can often be gauged even by means of a very brief and simple examination, for there are many occasions in general practice on which a more complete examination is impossible. It is not suggested that it is ever satisfactory to rely on such methods for diagnosis. As everyone knows who is familiar with the routine of eye practice, even the attainment of perfect visual acuity by means of glasses does not guarantee the absence of intra-ocular disease. No purely subjective methods of diagnosis can ever be relied on, and where such suggestions as have been made above are employed, a complete objective examination is indispensable if perfect vision cannot be obtained.

As an example of the danger of too lightly assuming the



absence of disease when visual acuity appears to be perfect, one may cite the case of chronic simple glaucoma. This disease, from its insidious and often obscure character, is a veritable bugbear to the physician, and even to the expert. The early subjective symptoms often present nothing that is characteristic, and the subjective methods of the optician may fail to reveal the nature of the trouble, for in many cases perfect central vision can be obtained with glasses. Even a more thorough investigation of the case may miss the point if, as sometimes happens, there is neither dilatation of the pupil, shallowness of the anterior chamber, nor cupping of the disc.

Glaucoma is not the only condition in which this may happen. One occasionally sees, for instance, a case of optic neuritis in which glasses had been ordered on account of headache or some other symptom, and in which quite a good visual result had been obtained. An ophthalmoscopic examination would have revealed the more serious aspect of the case. It is well enough known, too, that in many a case of retinal or choroidal disease, so long as the macula itself is not involved, perfect central vision may be obtained with or without glasses, and if an ophthalmoscopic examination is not made the presence of disease may be unsuspected.

A symptom which sometimes occurs in simple glaucoma, and which ought to arouse suspicion, is the too frequent demand for stronger reading glasses. Each new glass seems at the time of testing to be good, but in continued use proves unsatisfactory. When the patient comes fresh to his work or to the tests, vision may be perfect, but fatigue and a falling off in visual acuity is soon experienced, and he feels that a stronger glass is what is required. Another symptom which may be met with at the same stage of glaucoma is the demand for stronger and stronger illumination for reading and other close work. These symptoms are worth bearing in mind, for the halos round lights, which are known to be characteristic of glaucoma and are always enquired for, do not always occur. They depend on the occurrence of definite attacks of elevated tension with the consequent œdema of the corneal epithelium.

The *demand for stronger reading glasses*, which is met with in the earlier stages of simple glaucoma, is characteristic also

of cases of incipient cataract, but in this case satisfactorily sharp vision is not obtained. The patient chooses a stronger glass than that corresponding to the condition of his refraction, hoping by magnification of his retinal images to make up for their lack of clearness.

Toxic amblyopia, from the abuse of alcohol and tobacco, or from the effects of some other poison, is another of those conditions which cause the patient to make frequent and futile efforts to obtain suitable glasses. The central scotoma in the field of vision, which is characteristic of this affection, is not complained of as such, and since the reduction of form vision is only relative, even when central colour vision is quite gone, the patient may experience in the lighter grades only an annoying sense of dissatisfaction with his vision and with his glasses.

Many persons are in the habit of having their reading glasses changed by the optician from time to time as the need arises. The normal rate of increase should be not more than 1 dioptré for every five or six years between the ages of 40 and 60, and any demand for a more rapid addition to the strength of the glasses should arouse suspicion of the presence of some pathological condition, such as those to which reference has just been made.

The contrary experience, namely, a *desire for weaker reading glasses*, is sometimes met with in cases of early cataract, and results from changes in the refraction of the crystalline lens, which render the eyes myopic or less hypermetropic.

A symptom which may present some difficulty in interpretation is *unilateral loss of vision*. It is well known that a patient may complain of sudden loss of vision in one eye when, in reality, there has only been a sudden discovery of a pre-existing defect. These are usually cases of one-sided amblyopia. The defective eye is not entirely blind, but possesses very poor vision, and may even have defective power of macular fixation. Naturally, a diagnosis of amblyopia is not justified until a complete examination has been made, to exclude the possibility of fundus disease, and to ascertain the result of correcting any error of refraction.

It is often quite impossible to determine the date of onset of a one-eyed defect, and whether it was sudden or gradual. The



history given by the patient may be clearly unreliable, as, for example, when the eye which is supposed to have become suddenly blind presents a well-matured cataract; but sometimes enquiry elicits facts which help us. Thus, in such affections as detachment of the retina, retinal hæmorrhages, and retinal embolism, the occurrence may declare itself by a flash of light, a sudden slight pain, or some other less well-defined sensation which the patient can refer to a definite moment.

The statement of the patient that one eye is blind or defective may be quite erroneous. The real defect may, for instance, be homonymous hemianopsia, which not infrequently is misinterpreted as a blindness of one eye. If the defect is a persisting one, its real nature can easily be demonstrated; but if it is transient, as in a migrainous attack, we can only form our own opinion as to its hemiopic character from a consideration of the accompanying circumstances.

Recurrent or *transient attacks of dim vision* is a symptom which may be met with under a variety of circumstances. Some of these are of quite trifling importance, while others have a more serious significance, and the symptom may be equally alarming in both cases. Among the simplest examples is the obscuration of vision caused by secretion from the conjunctiva or lachrymal sac. When there is gross discharge the patient will almost certainly understand the cause of the occasional dimness; but in certain cases of chronic conjunctivitis a delicate veil of secretion or of epithelial detritus lying upon the cornea may cause sufficient overclouding of the vision to create some alarm in the mind of the patient. It is characteristic of this symptom that it is observed chiefly in the morning, and disappears gradually as the mechanical action of the lids and tears clears the surface of the cornea.

Dimness of vision coming on after using the eyes steadily for close work and recovering on resting the eyes is, in the vast majority of cases, an evidence of accommodative fatigue; but, as we have already seen, this form of transient defect may be complained of in simple glaucoma, even when the other early subjective symptoms of that disease are not observed.

Patients presenting themselves with embolism or thrombosis of the central retinal vessels often give a history of previous transient attacks of dimness of vision. These are no doubt

caused by temporary blockages—spasmodic in many cases—of vessels already narrowed by endovasculitis. The occurrence of such attacks in a patient known to suffer from retinal vascular disease might therefore be taken as a warning of the possibility of a total obstruction at some future date.

Vascular cramp in the retina has for long been put forward to explain cases of transient blindness or visual disturbance, but, until a comparatively recent date, authentic ophthalmoscopic observations of the actual occurrence were wanting; but some absolutely reliable observations are now on record, in which, during such attacks of blindness, narrowing of the retinal vessels could be distinctly seen, sometimes associated with other phenomena, such as cloudiness of the retina and pallor of the disc. In most of these attacks, one eye alone is affected. As in the cases of vascular obstruction above referred to, the retinal vessels may already be the seat of endarteritis or other organic changes.

There are other forms of transient visual disturbance in which we must rather assume the cause to be spasm or other change in the vessels supplying the visuo-sensory area of the cerebral cortex. Fortunately, these are not all of a serious character—indeed, they have not, on the whole, the grave prognosis as regards either vision or life which attaches to those we have just been discussing. I have in mind a group of cases which, in my experience, are not uncommon, in which on one or several occasions the patient experiences a somewhat alarming disturbance of vision, sometimes taking the form of a general clouding of vision, somewhat like that which characterises a syncopal attack, but more often occurring as a loss of some part of the field of vision—it may be central, peripheral, a half field, or a smaller sector. The subjects are comparatively young, and quite free from suspicion of cerebral vascular changes; not neurotic, but eager, hard-working, and of an intellectual type, often engaged in “brain work” at high pressure. When the attacks are repeated or periodic, some quite simple treatment may suffice to put an end to their occurrence. For example, a business man who takes an occasional attack about the middle of the day may find that by indulging in a sandwich and a cup of coffee in the forenoon he rids himself of the attacks; in others, a short holiday or



a rest from work and worry puts an end to the trouble once for all.

Under somewhat similar circumstances we may meet with complaint of *scintillating central scotoma* and other grotesque disturbances in the visual field. These cases may be related—at least in regard to the seat of the circulatory disturbance—to migraine, of which many atypical forms occur. Many of these atypical, as well as typical, cases of migraine find their way to the oculist, and it must be admitted that many of them receive great relief, if not complete cure of their symptoms, from the wearing of spectacles. One recent writer has gone so far as to say that if glasses fail to cure a case of migraine the estimation of the refraction has been inaccurate. This may be too sweeping an assertion, but it may be contended that the treatment of a case of migraine cannot be considered complete until the refraction has been estimated, and any error present corrected by suitable glasses.

It is now pretty generally known that optic neuritis, or rather papilloedema, with pronounced swelling of the disc, may exist for a long period without giving rise to any complaint of defective vision, and, indeed, with very little reduction of central vision as revealed by actual tests. In such cases a history of transient attacks of dimness may be the first thing to arouse suspicion, and when an ophthalmoscopic examination is made it is found that a pronounced papilloedema is already present. The occurrence of such attacks in cases of cerebral disease with papilloedema is generally recognised as adding to the gravity of the prognosis.

There are many peculiar and often vague subjective complaints which do not admit of classification, and the consideration of which would take us beyond the limits of this paper. Often the sensations complained of seem to have no relation to any objective reality, and one is apt to pass them by as purely imaginative. The larger one's experience, however, the clearer it becomes that no complaint of visual disturbance is too trifling to be worthy of investigation. To take only one example, it is surprising how vague and pointless the patient's complaint may be in such a serious condition as detachment of the retina. The patient may tell us that he feels as if there were a drop of water on his glasses, or as if a hair were drawn

across the eye, or he thinks the upper lid tends to droop, or that his nose is a little swollen. The moral, of course, is that, owing to the poverty of the patient's powers of observation and description, even the least impressive complaints may point to a quite serious condition, and that no symptom, however vague or slight, should be allowed to persist without having resort to an ophthalmoscopic examination.

#### EXTRA-OCULAR SYMPTOMS.

By far the most important of the extra-ocular symptoms traceable to the eyes is *headache*, and, thanks largely to the missionary zeal of the advertising optician, the relation between headache and ocular defects is now firmly impressed on the public mind.

There is no single type of headache which can be called strictly characteristic of eye-strain, so that we have to base a diagnosis of ocular headache on circumstances other than the mere site of the pain, and often the diagnosis can only be settled by waiting for the results of optical treatment. An eye headache may occupy any position—frontal, temporal, vertical, parietal, or occipital—and it does not monopolise any of these situations; nevertheless, the fact that the vast majority of ocular headaches are frontal and a very large number occipital, suggests the eyes as the source of a headache if it occupies either of these positions. The suspicion is greatly strengthened, in the case of a frontal headache, if it is low in position and seems to be part of a pain centering in the eyes and extending into the orbit and head, and, whatever be the nature of the headache, if it comes on during or after prolonged use of the eyes, especially at close work. This fact of association of the headache with the use of the eyes is seldom missed by the patient, even if it is a purely occipital headache, and the diagnosis is almost always confirmed by the discovery of some defect leading to accommodative or oculomotor strain.

When the patient's mode of life is regular, an ocular headache will usually have a regular periodicity. For example, a machinist, a draughtsman, or a bookkeeper will be free from headache in the morning, but it will come on and increase as the day advances, or it may make its appearance regularly



every evening after the day's work is done. In some cases—teachers, for example—the headache is persistent throughout the week, but the patient gets relief at the week-end from cessation of the usual occupation; while others, who use the eyes but slightly during the week and indulge in an orgy of reading on the Sunday, may have a purely week-end headache. Thus, a knowledge of the patient's habits will help us in correctly interpreting the symptom.

While it is chiefly work at close range, such as reading and sewing, which excites ocular headaches, there are many other circumstances which bring about the same result. Among these are shopping, travelling by car or train, and visits to picture galleries, theatres, and cinemas. The cinema headache has assumed quite an important place among eye symptoms within recent years. One frequently hears the remark that our eyes must be deteriorating, since so many of us nowadays have to wear glasses. Our experience of cinema headaches is one illustration of the fallacy of this argument. Many who were blissfully ignorant of any ocular defect, having neither dimness of vision, asthenopia, nor headache, have been driven to the use of glasses since the cinema habit revealed the existence of a slight astigmatism or other source of headache.

Fortunately in most instances of ocular headache the association of the symptom with use of the eyes is apparent, and a fairly confident diagnosis can be made; but there are many cases in which the connection cannot be easily traced, and in which, nevertheless, relief is to be obtained by glasses. The headache may be constant, and not apparently aggravated by use of the eyes, or it may be present on waking in the morning and disappear in the course of the day. Sometimes it seems to vary in situation. No doubt in many of such cases there are several contributing causes for the headache, but it is not difficult to believe that eyestrain may be the last in a series of stimuli, the summation of which gives rise to the pain. If it is even only one factor in the case, its relief will diminish, and may even remove, the headache.

In the investigation of a case of supposed ocular headache it is not sufficient to look for an error of refraction, for in a certain proportion of the cases the cause lies rather in a lack of balance in the action of the extrinsic eye muscles, with a

tendency to lateral or vertical deviation of the eyes—heterophoria, or latent squint. The headache in these circumstances may be quite indistinguishable from that due to refraction errors, but sometimes there are features which give a hint of the source of the trouble. One of these is the patient's discovery that the headache disappears on covering one eye; another is the fact that steady vision is rendered impossible by an annoying tendency to double vision. The former, which is chiefly experienced in reading, results from the fact that binocular single vision is only maintained at the expense of muscular fatigue; while the tendency to diplopia, which is usually experienced in contemplating distant objects—for example, the preacher in church—depends on the fact that when accommodation is relaxed the abnormal muscle effort required to maintain binocular vision is also relaxed, and the latent deviation becomes manifest.

It has been remarked that a frontal, and especially a low frontal, headache is very suggestive of an ocular cause. There is one well-marked exception to this. One is occasionally consulted by patients suffering from a low frontal headache, on the supposition that it is an ocular one, when, in fact, the seat of the trouble is in the frontal sinus. When the matter is looked into, it is found that the pain is situated in the upper inner part of the orbit, often on one side only, there is sometimes tenderness on pressure on that part of the orbital roof, and the headache has a characteristic periodicity, being present in the morning, increasing in intensity for some hours, say till mid-day or the early afternoon, and then quite rapidly or suddenly passing off, perhaps with a slight flow of mucous discharge in the corresponding nostril.

Perhaps, next to headache, the extra-ocular symptom which most frequently brings patients for an ocular examination is *giddiness*. In many of these cases the eye offers nothing to account for the symptom, but there are three aspects of the condition which come within the purview of the oculist. In the first place, vertigo is one of the recognised symptoms of eyestrain, and may be relieved by correction of an error of refraction. Again, in a patient suffering from paresis of one or other of the extrinsic ocular muscles, especially the inferior rectus or superior oblique, the false orientation obtained when



the eyes are turned in a downward or lateral direction often leads to giddiness, with a tendency to sway or fall. This phenomenon may be present although the patient is not conscious of diplopia—for example, when the area affected by the motor defect does not lie within the binocular field of vision.

The other case in which giddiness may come, in a sense, within the oculist's province, is that in which an examination of the fundus reveals changes indicative of arterio-sclerosis. This raises the presumption that a similar condition prevails in the smaller cerebral vessels, and lays upon the oculist the duty of reporting the facts to the patient or his friends, and referring him to his medical attendant for physical examination and the necessary treatment.

One might discuss under the heading of extra-ocular symptoms referable to the eyes the supposed influence of ocular defects in the causation of epilepsy and other disorders, but the experience of oculists in this country does not support the somewhat extreme attitude of some American authors, who trace almost everything, from migraine to homicidal mania, to eyestrain. It is not going too far, however, to state that in all such disorders as migraine, habit spasm, chorea, epilepsy, insomnia, &c., in which there is a state of instability or irritability of some part of the nervous system, it is sound practice to remove all possible causes of irritation, and to this category errors of refraction and oculomotor anomalies certainly belong. Without prejudice, therefore, to the general conduct of the case, the discovery and correction of such errors has a place in the rational treatment of these disorders.

---

ANEURYSM OF THE HEPATIC ARTERY—RUPTURE  
OF LIVER—PERIARTERITIS NODOSA.

By JOHN H. TEACHER, M.D.,  
St. Mungo (Notman) Professor of Pathology in the University of Glasgow ;

AND

WILLIAM R. JACK, M.D.,  
Visiting Physician, Glasgow Royal Infirmary.

ANEURYSM of the hepatic artery is a rare condition, and the present case is also of interest as an example of a rare pathological condition, namely, periarteritis nodosa. The disease terminated in the usual way, namely, by rupture of the aneurysm and fatal hæmorrhage. In a few cases the aneurysm has been found embedded in the liver, and in these, as in the present case, rupture of the liver was produced which might have been regarded as traumatic in origin. The following is an account of the case:—

A. J., a man aged 43 years, by occupation a tobacconist, was admitted to Ward III, Glasgow Royal Infirmary, on 15th February, 1916. He complained of swelling of the feet, breathlessness, and palpitation of a month's duration. He was a married man, with three children living and healthy; one had died at the age of 14 of pneumonia complicating rheumatic fever. His circumstances were good and his surroundings healthy, but he took very little exercise, ate disproportionately of butcher meat, and smoked excessively (fifty cigarettes a day) until eighteen months ago, when he reduced the cigarettes to about ten and cut down his consumption of butcher meat. He indulged moderately in alcohol. Two months before admission he practically stopped smoking. He had had no previous illnesses except slight colds. There was no history of syphilis or evidence of its former presence.

About eighteen months ago he had first noticed swelling of



the feet, puffiness under the eyes, and breathlessness on slight exertion. He was then under medical treatment for five months, being confined to the house and kept on a milk diet. After that he was able to go about until a month ago, when the symptoms returned. For a fortnight before admission he had been confined to bed, and during the last week had pains in the back and sides. In the last eighteen months his weight had fallen from  $14\frac{1}{2}$  st. to 11 st.

On admission the temperature was  $99^{\circ}$ , pulse 116, respirations 42. Orthopnoea was present, the breathing being laboured, rapid, and gasping. The face was pale, but not œdematous; the hands were swollen, but did not pit on pressure; the abdomen was protuberant; the feet and legs were very œdematous, pitting deeply on pressure, and the skin over the œdematous parts was white and glistening. The pulse was rapid, and not easily compressible; systolic blood-pressure 230 mm. The beats were unequal in force but not in rhythm, and the vessel wall was thickened. The apex beat was in the sixth interspace, 2 inches outside the nipple line, and of normal force. There was pulsation on the right side of the epigastric area. The cardiac dulness was increased, the left border being  $2\frac{1}{2}$  inches outside the nipple line in the sixth interspace, the right at the right border of the sternum, and the upper at the level of the third rib. The cardiac sounds were everywhere free from murmur; the first sound at the apex was somewhat booming, but elsewhere the sounds were weak, particularly in the tricuspid area. There was no accentuation of the second sound at the base. There were no venous or arterial murmurs.

The percussion note over the lungs was normal, as were the vocal fremitus and resonance and the respiratory murmur. There were abundant dry râles at the bases of both lungs.

The liver was somewhat enlarged, its lower edge being palpable an inch below the costal margin, and the right lumbar region was dull, tense, and painful to the touch. Jaundice was absent. There was no enlargement of the spleen. The distension of the abdomen made examination difficult, but the kidneys could not be palpated. The tongue was furred, and there was complaint of flatulence and occasional vomiting after

food, and of constipation. There was no evidence of organic disease of the stomach. Gastric and intestinal hæmorrhages were absent.

The nervous system showed no abnormality.

The urine was acid, amber-coloured, of specific gravity 1021, and contained abundant albumin and some casts, but no blood. The quantity passed in twenty-four hours was 20 ounces.

After a brief improvement following admission, the patient's condition steadily became worse in spite of treatment directed to the heart and kidneys. But for a temporary increase in quantity under theocin-sodium diacetate, the amount of urine remained subnormal, and œdema extended until anasarca was present. He had cardiac attacks, and from 10th to 17th March, and again from 29th March to his death on 6th April, there were periods of slight remittent fever, the temperature only once reaching 102°. During these he complained of some pain over the liver, and there was tenderness in the right hypochondrium, supposed to be due to engorgement of the organ. Besides theocin-sodium diacetate, hot packs, diuretin, and Guy's pill were tried in turn, and the legs were drained by Southey's tubes. None of these measures gave more than temporary relief, and he died somewhat suddenly, the death being attributed to cardiac failure. The diagnosis arrived at was that of cardio-renal disease.

The following is an account of the *post-mortem* examination:—

*External*.—The body was decidedly emaciated and œdematous in dependent parts. There was no external sign of syphilis.

*Thorax*.—The *lungs* were somewhat emphysematous, and there was pneumonia in the stage of early grey hepatisation and acute pleurisy on the right side.

The *heart* was greatly enlarged, principally from hypertrophy and dilatation of the left ventricle. There were white thickenings of the mitral and aortic valves without deformity. The myocardium was pale, but showed no localised lesion.

The *aorta*: The ascending portion appeared healthy, but in the arch there was much thickening and some irregularity



which was distinctly suggestive of syphilitic aortitis. This merged gradually into an advanced atheroma of the senile type in the descending thoracic and abdominal aorta. The large vessels rising from the aorta showed considerable thickening continuous with the lesion in the arch. The abdominal vessels showed advanced arterio-sclerosis both patchy and diffuse. The middle coat appeared generally thickened, and the vessels were very rigid. The splenic artery was extremely tortuous. No aneurysm was found.

*Abdomen.*—The *fundus* of the *stomach*, the *spleen* and the *left third or thereby* of the *omentum* were covered with blood-clot which extended between these organs and the *extreme left of the liver*. There was fully a pint of clot.

The *liver* was rather pale, but no definite general lesion was made out. Certain of the portal tracts appeared to be larger and more distinct than normally. A mass of blood-clot which filled the little space between the posterior corner of the left lobe of the liver and the diaphragm attracted attention, and was carefully preserved intact. It had remained behind when the rest of the clot was removed, being covered by a thin membrane in which no definite gap could be made out. This membrane was the capsule of Glisson, detached by the effusion of blood underneath it. The clot was roughly circular in outline, and about the size of a penny—3 cm. in diameter or thereby—with convex surface, and on incision in the antero-posterior direction it was found to extend about 1 inch into the liver and to arise from a small aneurysmal sac, fusiform in type, and measuring about 2 cm. in length by 1 cm. at its broadest part. Two other aneurysms were found—(a) very small about the middle of the right lobe, and (b) about as large as a walnut far out in the right lobe of the liver. The last had contained fluid blood. The other two were thrombosed. The vessels from which they had arisen were too small to admit a probe, but they were clearly branches of the hepatic artery. The portal veins accompanying them were clearly recognisable and healthy.

The *spleen* was enlarged, and contained several old infarctions.

*Kidneys.*—The right was a large lobulated cyst—a hydro-nephrosis due to kinking of the ureter round a nerve about

2 inches from the hilus. The left kidney was about normal in size, pale, finely granular, with irregular and rather thin cortex, being apparently in a late stage of sub-acute nephritis.

*Head.*—The arteries at the base were wide and rather rigid, and showed many pale yellow atheromatous patches, some of which encircled the vessel. They did not produce much narrowing of the channels, and were not definitely suggestive of syphilis. The floor of the fourth ventricle appeared normal, and the brain generally showed healthy characters.

*Microscopic examination.*—Sections were prepared from several portions of liver, spleen, kidney, aorta, and superior mesenteric artery with portions of pancreas attached. A portion of the aorta was taken from an area, the appearance of which suggested syphilitic mes-aortitis, but in section nothing characteristic of syphilis was found, the condition being apparently a simple atheroma of senile type.

The mesenteric artery also showed simple senile atheroma.

All the solid organs showed very striking old endarteritis obliterans affecting the small vessels, principally those below 2 mm. in diameter. In the neighbourhood of the pancreas there were two or three minute thrombosed vessels, one of which, about 1 mm. in internal diameter, showed slight thickening of the internal coat, organisation of the margins of the thrombus and some periarterial cellular infiltration, but there was no acute disease of the arteries.

*Spleen.*—The infarction was old. An artery near the hilus showed atheroma of the senile type, while two vessels near the infarction showed endarteritis obliterans with channelling of the middle of the new fibrous tissue. Probably this was in reality the result of organisation in thrombus. The condition was not like the arterial disease of the liver.

*Kidneys.*—There was swelling and catarrh of the epithelium and fairly old patchy interstitial cirrhosis with fibrosis of the glomeruli. The larger arterioles showed advanced endarteritis obliterans. The smaller arteries showed pronounced thickening, which in some cases was associated with fibrosis, and in others was due to hyaline degeneration which affected practically the whole thickness of the wall.



A similar condition was seen in many small vessels in the spleen. The hyaline material did not give the amyloid reaction. Two small cellular areas were also noticed which appeared to be situated round small vessels and showed some resemblance to the condition in the liver. In all these organs the arterial disease was essentially old, and in the kidney it was distinctly of the type which is associated with chronic nephritis.

*Liver.*—Sections were prepared from a considerable number of portions, one of which included the aneurysm, and another the same portal tract proximal to the aneurysm. In the first the aneurysm was cut transversely, probably a little proximal to the rupture. The section of the vessel was oval, measuring about 4 by 2.5 mm. in diameter. It was filled with thrombus, and its wall was extremely degenerate, the arterial structure being clearly recognised only at one limited area. The degeneration was similar to that described below. The unaffected portion of the artery could not be made out in the other section, but there was an artery 1 mm. in internal diameter which was *not* that of the aneurysm. The latter was probably a branch, and from the condition seen in other sections was probably not more than  $\frac{1}{2}$  mm. in internal diameter. None of the arteries which showed acute changes had a diameter of materially over  $\frac{1}{2}$  mm. The larger arteries in some cases showed evidence of chronic arterio-sclerosis. The acute lesions were of two main types—(1) arteritis and periarteritis affecting vessels of about  $\frac{1}{2}$  mm. in internal diameter; (2) groups of cells resembling tubercles situated upon very small blood-vessels. In addition, intermediate forms were seen.

In the first type the commonest appearance was that of an artery in which the middle coat was either completely or partially necrotic, the appearance in some cases suggesting an acute coagulation necrosis, while in others it was more like hyaline degeneration. The external coat was replaced by a comparatively broad zone of cellular granulation tissue. The condition of the internal coat varied considerably. In a few instances the endothelium was raised from the wall and had proliferated. In others there was a considerable formation of cellular tissue constituting an acute endarteritis obliterans. The variation was apparently dependent upon the severity of

the change in the middle coat; where the endarteritis obliterans had occurred, the injury to the middle coat was less, a fact which suggests that the primary lesion was periarterial. In some cases polymorphonuclear leucocytes were numerous, and the condition appeared to be fairly acute. In these cases thrombosis had generally occurred. The degeneration usually included the internal elastic lamina. Vessels were seen cut obliquely in which one end of the section showed this condition, while the other was more or less healthy, which may be taken as an indication of the patchy or nodose character of the lesion.

In the second type the minute granulomata frequently resembled typical tubercles with caseous centre, but in no case were giant cells observed. In a number of specimens the centre of the nodule was found to be a minute vessel.

Tissue containing both types of lesion was impregnated with silver by Levaditi's method, but spirochaetes were not found. Sections were also examined for tubercle bacilli with negative result. The portal tracts generally showed a considerable amount of diffuse fibrosis with numerous lymphocytes, and the liver tissue in the neighbourhood of the affected tracts generally showed an excess of lymphocytes among the cell columns. The condition may be summed up as a comparatively acute disease of the small arteries affecting principally the branches of the hepatic artery, and in a few instances producing aneurysm.

The literature of aneurysm of the hepatic artery was collected and very thoroughly summarised by Rolland in the *Glasgow Medical Journal* in 1908 in reporting a case almost identical with the present. Rolland succeeded in tracing in all 40 cases. In 24 cases the aneurysm was extra-hepatic, in 8 intra-hepatic, in 2 there was an extra-hepatic and an intra-hepatic aneurysm, while in the remaining 6 the relation of the liver parenchyma is not stated. The size of the aneurysm varied very greatly, the largest being as big as a child's head, the average about that of a hen's egg. The intra-hepatic aneurysms are usually small, and in 4 cases rupture of a small deeply imbedded aneurysm took place into the peritoneum, and in all these cases



there was a rupture of the liver on which Rolland comments as follows:—

“In a cursory examination this appears like an ordinary traumatic rupture except that Glisson’s capsule is apt to be stripped from the liver and careful dissection is required to determine the true cause of the lesion. One can imagine what far-reaching effects a case of this kind might have if occurring in asylum practice, where there was any question of violence being used in restraining the patient.”

*Symptoms.*—In some cases there have been no symptoms referable to the liver, the rupture being the first indication that anything was wrong locally. In other cases there have been definite symptoms, of which the most common are pain, jaundice, and hæmorrhage. The hæmorrhage occurs either from the stomach or intestine, and a striking feature about these hæmorrhages is that they recur, frequently with varying intervals between them. It is suggested in explanation of this that the bleeding has occurred into the bile passages, and that by the rapid filling of them by blood the bleeding is itself checked. Pain when it occurs tends to be of a paroxysmal type resembling that of biliary colic. The pain complained of in the present instance was not of this type, but was slight, and was associated with some tenderness, so that it was thought to be caused by enlargement of the liver due to the cardiac condition. Jaundice is due to pressure on the hepatic ducts or common bile duct. It was absent in this instance. Fever is another symptom mentioned by Rolland as present in a few cases, sometimes accompanied by rigors, sometimes reaching  $104^{\circ}$ , and tending to coincide with the height of the paroxysm of pain. In the present case the temperature only once reached  $102^{\circ}$ , and a special relation to the pain was not observed.

Digestive disturbance is commonly present. Murmurs and pulsation have never been recognised.

*Diagnosis.*—The condition is usually mistaken for cholelithiasis or duodenal ulcer, and a correct diagnosis has been made during life by exploratory incision. In one case the hepatic artery was successfully ligatured.

*Etiology.*—This probably is different in different cases. The

conditions which with good reason have been regarded as causes in certain cases are gall-stones producing direct injury to the vessel, infective embolism and ulceration of the artery by an abscess in the liver. In 3 cases of Rolland's series syphilis was regarded as the cause. The patients in these cases were definitely syphilitic subjects, and there was an arteritis like that seen in the present case, but the direct demonstration of the syphilitic nature of the disease could not be established.

*Summary.*—A man of 40 years of age apparently suffering from cardiac and renal disease died suddenly from intra-peritoneal hæmorrhage. This was found to have come from a rupture of the left lobe of the liver, the cause of which was the bursting of an aneurysm of a small branch of the hepatic artery deeply imbedded in the liver tissue. The hepatic arteries were found to be the seat of a widespread patchy sub-acute inflammatory condition which has been described as periarteritis nodosa. The cause of this condition is not clear, but there is evidence in favour of its being syphilitic.

---



CESSATION OF VERTIGINOUS ATTACKS FOLLOWING  
INTRA-NASAL TREATMENT.

BY ROBERT FULLERTON, M.D.,

Honorary Surgeon for Diseases of Throat and Nose, Glasgow Royal Infirmary.

THE following cases are of interest from a scientific and practical point of view. Although not in the same degree, these cases all showed symptoms pointing to excitation of the vestibular apparatus, which disappeared after removal of the accompanying nasal obstruction.

CASE I.—G. H., aged 32 years, was referred to me by the late Professor Samson Gemmell in 1899, complaining of vertiginous seizures. He stated that the first of these had occurred three years previously, and from that time until five months ago he had been free, but during the last five months he had had an attack about every fortnight. The first took place while going to business in the morning. He became giddy and swayed about, surrounding objects appeared to move in a billowy fashion, he felt anxious, confused, and helpless, and had to cling to a lamp post to keep from falling. Ultimately, sickness and vomiting supervened, but he did not lose consciousness. He went home to bed, and felt quite well the next day. His later attacks were all more or less of the same character, and were apt to occur during the night in bed, or when up and about. One was precipitated by forcibly blowing his nose, and he was inclined to become giddy on rapidly turning over in bed. An onset was generally preceded by a feeling of fulness in the head, and tinnitus in the left ear. He became conscious of this tinnitus a fortnight before his first attack, after which it ceased until five months ago. It then became continuous, and was greatly intensified for an hour or so before a seizure. He had chronic middle-ear catarrh, with slight thickening of both tympanic membranes, and some hyperæmia around the short process of the left. His power of hearing on the right side was practically normal, but on the left was diminished to about one-third. Hearing by bone

conduction seemed unaffected. He did not hear so well for a few days after an attack. Well-marked chronic hypertrophic rhinitis, with polypoid thickening of both middle turbinals, was found on examining his nose.

Treatment, consisting of a series of blisters over the mastoid process, dilute hydrobromic acid and quinine, and a course of Carlsbad salts, was carried out for three weeks without any benefit. Two months later he reported that since the nasal treatment the attacks had been less frequent and less severe. Having contracted scarlet fever, he did not present himself again until four months later, when he stated that the attacks continued in a less aggravated form, and that loud noises were heard in the left ear. His left turbinals were now treated as the right had been. When I saw him six months later the sounds in his left ear had become reduced to a slight hissing, and he had remained free from other symptoms. Some time afterwards he left Glasgow, but I learned that for thirteen years he had had no further vertiginous seizures.

The three following cases were referred to me by Dr. Miller Semple, of Dennistoun:—

CASE II.—G. N., aged 36 years, was seen in 1900, when he stated that for the past three years he had been subject to attacks of giddiness at irregular intervals. He was seldom free from them longer than a fortnight, and had had as many as three during a week. They began suddenly, with dulness of hearing, singing in the right ear, and what he described as a storm in the left. External objects did not appear to move, he did not get sick nor lose consciousness, but he experienced a giddy confused feeling in the head, with a tendency to fall towards the right. The attacks were never very severe, and on one occasion one occurred while he was playing the piano; but although the notes were heard to be wrong he continued to play, and in five minutes felt well again. There was a chronic catarrh of both middle ears, and his power of hearing was somewhat diminished. The condition of his nasal passages was similar to that of the previous case. After administering dilute hydrobromic acid for six weeks without effect, I reduced his turbinals on both sides. Following this,



all his former symptoms disappeared. I saw him eight years later, and up till that time he had had no recurrence.

CASE III.—Mrs. C., aged 35 years, was seen by me in 1905, when she stated that for several years she had been subject to slight giddy attacks, with a feeling of confusion and a tendency to fall forwards. She had no loss of consciousness, no noises in the head nor tendency to sickness, and was generally able to let herself down on her knees, and rest in that position, until the sensation had passed. On account of this condition she had to discontinue cycling, of which she was very fond. Her ears were normal, but there was left nasal obstruction. I relieved this obstruction, and when I last heard from her nine years later she was still quite free from her former symptoms.

CASE IV.—R. M., aged 28 years, came in 1907 complaining of giddy attacks that compelled him to grasp something to keep from falling. They had taken place since he was a boy. He had had as many as two in one day, but there was usually an interval of weeks or months between them. He had no noises in the head, did not feel sick nor lose consciousness, but objects appeared to move from right to left, and he staggered towards the left side.

Both tympanic membranes were slightly indrawn. Hearing was acute on the left side, but on the right he only heard the watch at half the distance—5 feet. A tuning-fork placed on the vertex was heard in the left ear. Both middle turbinals were found to be pressing against the septum. I removed the anterior portion of his left middle turbinal.

I did not see him again until eleven months later, when he stated that he had had only two attacks during that time, but complained of noises and deafness in his right ear. He could only hear the watch with the right ear on contact, and little improvement followed inflation of the tympanum. I now cauterised his right lower turbinal, and removed the anterior end of the middle turbinal. When last seen eight months later he had had no further attacks, and could hear the watch on the right side at a distance of 1 foot.

All four patients were in the prime of life, were in comfortable circumstances, and led active healthy lives. They all

looked well, and only in the last case could I detect any evidence of the existence of a neurotic disposition.

The apparent effect of nasal treatment on the giddy attacks in the first case came as a surprise, and encouraged me to undertake similar measures in the others with some hope of beneficial results.

It is difficult here to dissociate the disappearance of the vertiginous attacks from the relief afforded by the removal of nasal obstruction, and the results obtained are all the more striking as these are the only cases of this kind I have met with in private practice. Several other hospital patients were treated on the same lines, but I am unable to say whether they derived permanent benefit or not.

For an elucidation of the mechanism involved in the causation of the symptoms dealt with here one must look to the experimenting physiologist, although theories may be entertained in regard to it. To see how varied and subtle the exciting causes may be, it is only necessary to mention that, among other causes, vertigo may be induced by anæmia, rotation of the body, watching running water, tobacco smoking, or looking down from a great height.

Defining co-ordination as the adjustment of the various afferent and efferent impulses concerned with the securing of equilibrium, it will be observed from the different forms of vertigo that these impulses may be affected in various ways. Whether, however, the remote cause be toxic, psychical, or mechanical, it is not improbable that the immediate cause is one and the same in all cases. From the fact that dizziness is often associated with anæmia, and that pallor of the face is seen in vertigo from whatever cause, it is not unreasonable to assume that anæmia of the brain structures concerned in transmitting these impulses is the immediate cause.

As to the conditions present, local or general, which favoured the occurrence of these attacks at one time and not at another, it is idle to speculate. Had it been possible to examine the patients shortly before or after the seizures, some useful point in this connection might have been learned. The practical point to bear in mind is that in patients with symptoms such as I have stated nasal obstruction should be looked for, and appropriately treated.



## Obituary.

---

### ON SERVICE.

CAPTAIN DAVID THOMAS CRICHTON FREW,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce the death of Captain D. T. C. Frew, which took place at Aldershot on 29th September after an operation for appendicitis. Captain Frew, who was 29 years of age, was the only son of Mr. D. A. Frew, of Burnbank Terrace, Glasgow. He was educated at Glasgow High School, from which he went to Glasgow University for the study of medicine. He had a distinguished career as an undergraduate, and crowned it in 1911 by taking the degrees of M.B., Ch.B. with honours. After graduation he held the posts of resident physician and resident surgeon in the Western Infirmary, and subsequently that of house surgeon to the outdoor department of the Glasgow Maternity and Women's Hospital. He afterwards became lecturer in anatomy at the Western Medical School, a post which he held with much acceptance until shortly before he joined the army. He was also extra dispensary physician and clinical assistant in Glasgow Royal Infirmary. He began practice in Burnbank Terrace about four years ago, and very soon demonstrated that he had all the qualities making for success. In May, 1915, he joined the R.A.M.C., and was wounded in the trenches in Flanders in the following October, but was not long incapacitated for duty. He was married in May, 1916, to a daughter of the late Dr. Perregaux, of Paris, and is survived by his father, mother, and widow. In the few years which were given him Dr. Frew had already accomplished much good work. He had in no small measure the capacity for taking pains; he had a sound clinical instinct and an appreciation of the direction in which research might be fruitful; and he had the ability to impart his own ever-widening knowledge.

He was held in high esteem both by his patients and by his colleagues, by whom his loss will be widely regretted.

---

---

JEAN THOMSON GILMOUR, M.B., CH.B. GLASG.,  
SALTCOATS.

WE regret to announce the death of Mrs. W. M. Gilmour, of Saltcoats, which took place on 23rd September at a nursing home in Glasgow, two days after that of her infant daughter. A native of Cumnock, where she received her elementary education, Miss Jean Thomson Clark, as she was before her marriage, studied medicine at Queen Margaret College. She was one of the outstanding students of her day, taking a high place in all her classes and gaining many medals. In her final examination she passed with distinction in medicine and surgery, and she took the degrees of M.B., Ch.B. in 1905, in the same year as her future husband, Mr. W. Macmillan Gilmour, M.B., Ch.B. After her marriage she went with him to South Africa, where they both practised for about nine years in Graaf Reinet. There they rapidly became widely known, and acquired a very extensive practice. Two years ago Mr. Gilmour returned to this country and took over the practice of Mr. William Turner in Saltcoats, where he was soon after joined by his wife. In Saltcoats, as in South Africa, Mrs. Gilmour rapidly became popular, and earned the confidence and affection of her patients both by her professional ability and by her personal qualities of enthusiasm and warm-heartedness. Mrs. Gilmour belonged to a medical family, four of her brothers being in the profession, and two of her sisters, like her, being married to medical men. Her death will be genuinely mourned by the large number of friends whom, in these brief months, her influence had already drawn around her.

---

JAMES DUNCAN COCHRAN, M.B., CH.B. GLASG.,  
ABERFELDY.

WE regret to announce the death of Mr. James D. Cochran, which took place at his house in Aberfeldy on 1st October.



Mr. Cochran, who was in his forty-third year, was a native of Kingairloch, Argyllshire, and studied medicine at Glasgow University, where he took the degrees of M.B., Ch.B. in 1897. He afterwards acted as house physician and house surgeon in the Western Infirmary, Glasgow; he then became clinical assistant in Glasgow Royal Asylum; and he was for a time house surgeon and, later, assistant surgeon in Glasgow Eye Infirmary. After this thorough training he settled in practice at Bridge of Walls, Shetland, where he remained for about seven years. He removed to Aberfeldy in 1913, and there his ability speedily found recognition, and he was appointed to the position of medical officer for the parishes of Fortingal and Weem. He is survived by a widow and two young sons.

---

ALEXANDER MACINTYRE, M.D. GLASG.,  
INNELLAN.

WE regret to announce the death of Dr. Alexander Macintyre, of Innellan, which took place very suddenly at Symington on 1st October. Dr. Macintyre, who was a student of Glasgow University, took the qualification of the Edinburgh Colleges in 1880, and in the same year took the Glasgow degrees of M.B., C.M. Ten years later he took the M.D. of Glasgow. He had for long been in practice in Innellan, and was parochial medical officer and public vaccinator for the districts of Innellan and Toward. He was widely known over the countryside, and both as a physician and a man was universally respected and esteemed.

---

JOHN STEWART BOYD, L.R.C.P. & S.E., L.R.F.P.S.G.,  
LONDON.

WE regret to announce the death of Mr. John Stewart Boyd, which occurred at Richmond, Surrey, on 6th October. He was the elder son of Mr. Adam Boyd, of Gourrock, and studied medicine in the University of Glasgow, taking the Triple Qualification in the year 1888. His practice lay in the east end of London, and he was medical officer for No. 6 District of the West Ham Union.

## CURRENT TOPICS.

---

UNIVERSITY OF GLASGOW: GRADUATION IN MEDICINE.—A special graduation ceremony, arranged for the purpose of enabling students who have qualified for the profession of medicine to enter upon army service, was held on 9th October at Glasgow University. Degrees were conferred upon twenty-six graduates, four of whom were ladies. Nearly all the male graduates, it was mentioned, have been approved for commissions in the Royal Army Medical Corps. Principal Sir Donald MacAlister performed the capping ceremony, and the graduates were introduced by Professor Bryce. After conferring the degrees, Sir Donald MacAlister, on behalf of the Senate, congratulated the graduates on gaining entrance to the profession of medicine, and especially those of them who had been approved for commissions in the medical service of their country. The Principal intimated that the Brunton Memorial Prize of £10, awarded to the most distinguished graduate in medicine of the year, had been gained by Ernest M'Murchie Dunlop, who was now on service with the R.A.M.C. The following is a list of the degrees conferred:—

### BACHELORS OF MEDICINE AND BACHELORS OF SURGERY (M.B., CH.B.)

#### I. WITH COMMENDATION.

John Stirling, B.Sc.  
James MacAlister Mackintosh, M.A.  
Helen Young Murdoch, M.A.

#### II. ORDINARY DEGREES.

Joseph Edward Bannen.	Ann Kelly Cormack.
James Beveridge.	James Crerar.
Alexander George Brand.	Robert Cunningham.
Henry Drummond Brown.	William Donald.
William Moore Cameron, M.A.	George Mundell Hetherington.
Allan La Barte Clark.	Arthur Robert Hill.
David Clyde.	Tom John Honeyman.



II. ORDINARY DEGREE (*continued*).

James Neil Jamieson, M.A.  
 Stewart Johnstone.  
 Margaret Jane Thorburn Leitch.  
 Hugh Ernest M'Coll.  
 David Bell Robertson.

James Steel.  
 Herbert Watt Torrance.  
 Robert Nisbet Walker, M.A.  
 Alison Edgar Wilson.

The following passed the final examination with distinction:  
*In Surgery and Clinical Surgery*—Hugh Ernest M'Coll. *In  
 Medicine and Clinical Medicine*—Helen Young Murdoch, M.A.  
*In Midwifery*—James MacAlister Mackintosh, M.A.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS: NEW FELLOW.  
 —At the monthly meeting of the Royal Faculty of Physicians  
 and Surgeons of Glasgow, held on 2nd October, Mr. Claude  
 St. Aubyn-Farrer, L.R.C.P.Edin., L.R.C.S.Edin., L.R.F.P.S., 5  
 Harley Street, London, was admitted (after examination) as a  
 Fellow, *qua* Physician.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS: DENTAL  
 PASSES.—At the recent examinations of the Royal Faculty of  
 Physicians and Surgeons of Glasgow the following passed the  
 final examination, and were admitted licentiates in dental  
 surgery:—William Coulson Tregarthen Craze, Glasgow; Archi-  
 bald Hamilton Wright, Glasgow; James Roy Williams, Birming-  
 ham; William Joseph Proud, Durham; James Bryson Galloway  
 Duncan, Paisley; John Patrick Finnan, Glasgow; John Caldwell  
 Rennie, Paisley; John Matthew, Glasgow.

APPOINTMENTS.—The following appointments have recently  
 been made:—

*Royal Navy* (20th September): Temporary Surgeon S.  
 Robertson, M.B., Ch.B.Glasg. (1914), to *Victory*, additional for  
 disposal.

*2nd October*: Temporary Surgeon W. W. Rorke, M.B., Ch.B.  
 Glasg. (1909), to R.M.A., Eastney.

*Royal Army Medical Corps* (16th September): To be tem-  
 porary Captains—Temporary Lieutenants M. M'K. M'Rae, M.B.  
 Ch.B.Glasg. (1908); W. Forsyth, M.B., Ch.B.Glasg. (1913); J.  
 A. Conway, M.D.Glasg. (M.B., 1911); W. Cullen, M.D.Glasg.  
 (M.B., 1884); T. S. Brodie, M.B., C.M.Glasg. (1893); J. Lindsay,

M.D.Glasg. (M.B., 1892); J. W. W. Hewitt, M.B., Ch.B.Glasg. (1914); D. C. Maclachlan, M.B., Ch.B.Glasg. (1907); W. F. Shanks, M.B., Ch.B.Glasg. (1915); J. Dickie, M.B., Ch.B.Glasg. (1912); W. Gilmour, M.D.Glasg. (M.B., 1908); D. McKail, M.D. Glasg. (M.B., 1897); G. R. Spence, M.B., Ch.B.Glasg. (1910); D. Ferguson, M.B., Ch.B.Glasg. (1914); J. C. D. Simpson, M.B., Ch.B.Glasg. (1906); W. E. H. Beard, M.B., Ch.B.Glasg. (1911).

*21st September:* To be temporary Lieutenants—R. C. Macpherson, M.B., Ch.B.Glasg. (1905); R. Adam, M.B., Ch.B.Glasg. (1903); H. W. B. Monteagle, M.D.Glasg. (M.B., 1886); P. A. Steven, M.B., Ch.B.Glasg. (1899); J. A. C. Doonan, M.B., C.M. Glasg. (1896); W. Gibson, M.D.Glasg. (M.B., 1900).

*26th September:* Temporary Honorary Lieutenant-Colonel D. W. Finlay, M.D.Glasg., relinquishes his commission on vacating the appointment of Officer in Charge, Red Cross Hospital, Bellahouston, Glasgow. Temporary Honorary Major H. Chaffer, F.R.C.S., to be temporary Honorary Lieutenant-Colonel whilst Officer in Charge, Red Cross Hospital, Bellahouston, Glasgow.

*3rd October:* To be temporary Major—Temporary Captain J. F. Lambie, M.B., Ch.B.Glasg. (1900).

*11th October:* Temporary Captain F. G. W. Deane, F.R.C.S.Ed., to be temporary Major whilst in charge of Springburn and Woodside War Hospital. To be temporary Captains—Temporary Lieutenants J. S. Gilchrist, M.B., Ch.B.Glasg. (1915); J. D. Watson, M.B., Ch.B.Glasg. (1915); J. M. Macfie, M.B., Ch.B. Glasg. (1915); W. Cunningham, M.B., Ch.B.Glasg. (1915); J. A. Leiper, M.B., Ch.B.Glasg. (1915); J. C. Knox, M.B., Ch.B.Glasg. (1915), B.Sc.; N. B. Laughton, M.B., Ch.B.Ed. (Mount Florida); J. P. Lusk, M.B., Ch.B.Glasg. (1902); M. S. Bryce, M.B., Ch.B. Glasg. (1914); C. C. B. Gilmour, M.B., Ch.B.Glasg. (1915); D. M. R. Crichton, M.B., C.M.Ed. (Maryhill); M. Sommerville, M.B., Ch.B.Glasg. (1912); J. K. Morton, M.B., C.M.Glasg. (1887); C. G. A. Chislett, M.B., Ch.B.Glasg. (1906); T. B. Riddall, M.B., C.M.Glasg. (1898); S. Bryson, M.B., Ch.B.Glasg. (1915); J. M. Anderson, M.B., Ch.B.Glasg. (1915); W. E. A. Buchanan, M.B., Ch.B.Glasg. (1915); D. F. Macdonald, M.B., Ch.B.Glasg. (1915), B.Sc.; W. G. Macdonald, M.B., Ch.B.Glasg. (1905); A. C. West, M.B., Ch.B.Glasg. (1905); A. B. MacLean, M.B., Ch.B.Glasg. (1910).



*13th October*: To be temporary Major whilst in command of a Field Ambulance—Temporary Captain J. R. C. Greenlees, D.S.O., M.B.Cantab. To be temporary Lieutenants—J. L. Gregory, M.B., Ch.B.Glasg. (1913); E. C. Beard, M.B., Ch.B. Glasg. (1913).

*R.A.M.C., Territorial Force* (20th September): Scottish General Hospitals—Major J. M. Cowan, M.D.Glasg., is seconded for duty with a Field Ambulance. Captain D. Lamb, M.B., C.M.Glasg. (1891), is seconded for duty with a Field Ambulance.

*7th October*: The following announcement is substituted for that which appeared in the *Gazette* of 27th October, 1914:—Major Samuel M. Sloan, M.B., Ch.B.Glasg. (1897), from attached to units other than medical units, to be Major; Major Samuel M. Sloan to be Lieutenant-Colonel.

WAR HONOURS FOR GLASGOW GRADUATES.—In the list of awards for distinguished service, published in the *London Gazette* of 22nd September, it is announced that His Majesty the King has been graciously pleased to bestow the D.S.O. upon Captain James Walker Jones, M.B., Indian Medical Service. Captain Jones was a student of Glasgow University, where he took the degrees of M.B., Ch.B. in 1910.

His Majesty has also bestowed the Military Cross upon temporary Captain John Maitland Forsyth, M.B., R.A.M.C., who studied medicine at Glasgow University, and took the degrees of M.B., Ch.B. in 1912; upon temporary Captain Francis Joseph Henry, M.B., R.A.M.C., a graduate of Glasgow in 1901, D.P.H. Cantab., and F.R.C.S.Ed., who, before the war, was tuberculosis officer for the county borough of Middlesbrough; upon temporary Captain George MacLeod, M.B., R.A.M.C., a graduate in Arts and Medicine of Glasgow University, where he took the degrees of M.B., Ch.B., with honours, in 1909, filling the post of senior resident physician at the Western Infirmary after graduation, and being subsequently appointed assistant tuberculosis officer for the city of Liverpool; and upon Captain Archibald Watson Russell, M.B., R.A.M.C., Special Reserve, a graduate of 1913, afterwards house surgeon in the Glasgow Royal Maternity Hospital and casualty surgeon in the Western Infirmary.

The *London Gazette* of 26th September further announced

that His Majesty had bestowed the Military Cross upon temporary Captain John M'Intosh, M.B., R.A.M.C., a graduate of 1909, who showed "an utter disregard of personal danger on several occasions when tending and removing the wounded;" and upon Captain William Semple Wallace, M.B., R.A.M.C., Special Reserve, a graduate of 1914, who tended wounded under very heavy shell fire, and "continued working after being twice buried and partly stunned by exploding shells."

GLASGOW MEDICAL CASUALTIES.—The following casualties have during the past month befallen graduates and students of the Glasgow medical school:—

Captain John C. Pyper, M.B., R.A.M.C., has been slightly wounded by shell in the leg and arm. He is a graduate of 1912, and, before the war, was in practice in Troon. Earlier in the year he was invalided home with fever.

Captain James D. Hart, M.B., R.A.M.C., has been wounded in France. He was a student of Glasgow University, where he took the degrees of M.B., Ch.B. in 1905, and he afterwards filled the positions of resident dispensary assistant and house surgeon in the Western Infirmary. Before the war he was in practice in India. Captain Hart is one of four brothers, all of whom came home from abroad to receive commissions at the outbreak of war. One was killed and another wounded at the Dardanelles; the third is in the Army Service Corps in France.

Second Lieutenant William J. S. Cameron, son of the Rev. Donald Cameron, M.A., has been severely wounded by a bomb. He was a third year medical student at Glasgow University when he received his commission in December, 1914. He has been on active service since October of last year.

NEEDS OF THE ROYAL INFIRMARY.—It will be in the recollection of most of our readers that at the last annual meeting of the Glasgow Royal Infirmary the ordinary revenue for the preceding year was stated to be £33,250, and the ordinary expenditure £61,750, leaving a deficiency on ordinary account of £28,499. This was partly met by the use of the extraordinary revenue, leaving a net deficiency of £15,428. Annual public subscriptions amounted to little more than a third of the ordinary expenditure. This state of affairs was rightly



characterised by Lord Strathclyde as alarming, and was referred to, in accents of serious concern, by the Lord Provost and those of the managers who spoke. Suggestions were made as to the means by which public interest might be stimulated, and attention directed to the clamant necessities of the oldest and greatest of Glasgow's medical charities. It is doubtless one result of these suggestions that a pamphlet, entitled *The Mansion House: Glasgow's Greatest Guest-house, its Purpose and its Problems*, has recently been issued to the public. The pamphlet, which is freely illustrated from photographs, is forty pages in length, and contains, besides a general description of the beneficent activities of the Royal Infirmary, articles by the senior physician and surgeon and the consulting medical electrician upon the work of their great departments. Figures are given, sufficient to enlighten without bewildering the reader, as to the numbers of sick who are daily and annually treated within the walls and in the outdoor dispensary, as to the number of operations annually performed, and as to the number of attendances in the electrical department. They are no doubt familiar, theoretically at least, to all into whose hands the annual report of the institution comes; but the present publication will appeal to a wider circle, and may even help to bring home the facts to those rare subscribers to whom reports are dry reading. The tone of the pamphlet is popular, and rightly so; it is a popular appeal that is needed at the moment. It is from the conscience and the charitable impulses of Glasgow and the West of Scotland that the response must come, and these, which have never yet failed any generous cause when once the need was known, require but to realise the urgency of the situation, as no statistical report can make them realise it, to be moved to still further benevolence. It is a time of unexampled giving, of unexampled drains upon the incomes of the charitable. Yes, but the giver gives also to himself—in happiness.

ADDITIONS TO SPRINGBURN HOSPITAL.—An important addition to the accommodation for wounded soldiers in Springburn Central Hospital was inaugurated on 22nd September. General Culling, Deputy Director of Medical Services, Scottish Command, in the absence of the Countess of Eglinton and Winton,

formally opened the new addition, which has been named the Victoria Ward. There was a large attendance of ladies and gentlemen interested in Red Cross work in Glasgow, including Sir George Beatson, Sir Hector Cameron, Miss Haldane, Sir William and Lady Bilsland, Mr. Hugh Reid, Mr. John Reid, Lady Mason, Mrs. Dudgeon, Mrs. Lobnitz, Miss Melrose, Principal Matron for No. 3 Hospital, and Captain Deane, officer in command of Springburn Hospital.

Sir George Beatson, who presided, said that it had been the feeling of the War Executive Committee of the Scottish Branch of the Red Cross Society that formal recognition should be given the brothers Reid for the generosity which had prompted the additional gift. The presentation of the hospital had been in itself a worthy record of their kindly feelings towards the work of the Red Cross, and the addition, in present circumstances, was both timely and thoughtful.

General Culling, in declaring the ward open, stated that he had been authorised to convey to the Messrs. Reid the appreciation of the War Office officials for their generosity. When the big "push" came it was recognised that extra accommodation would be required, and the gift of another ward at Springburn had been highly acceptable.

Sir Hector Cameron moved a vote of thanks to the North British Locomotive Company, Limited, for the presentation of the ward to the Red Cross.

Mr. Hugh Reid, in reply, thanked Sir Hector and the meeting for their kind expressions of appreciation.

The Victoria Ward provides accommodation for 85 patients. This brings the total capacity of the hospital up to 285 patients. Since the hospital was opened in December, 1914, more than 3,000 soldiers have received treatment.

EXPERIMENTS ON LIVING ANIMALS.—A return showing the number of experiments on living animals in England and Scotland during 1915 was issued on 22nd August. In the report of Mr. G. D. Thane, chief inspector, it is shown that twenty-one new places were registered for the performance of experiments, and two were removed during the year. Thirteen of the new places are laboratories connected with naval or military hospitals and sanitary institutions. The



total number of licensees was 664, and the reports furnished show that 322 licensees performed no experiments. The total number of experiments other than those of the nature of simple inoculations, hypodermic injections, or similar proceedings performed under the influence of an anæsthetic was 2,771, and the number devoted to inoculations was 67,521. There is a decrease of 16,680 in the number of experiments as compared with 1914, there being 2,118 fewer in the first class and 14,562 fewer in the second. The returns show that 11,657 experiments were performed by fourteen licensees in the course of cancer investigations. Of these 281 were performed under anæsthetics, and 11,376 without these, consisting almost entirely of inoculations into mice. Seventy licensees report over 20,000 experiments performed for Government Departments, county councils, municipal corporations, or other public health authorities, and twelve licensees report nearly 25,000 experiments for the preparation and testing of antitoxic sera and vaccines and for the testing and standardising of drugs.

The inspectors report that for the most part their visits were made without previous notice. They found the animals suitably lodged and well cared for, and the licensees generally attentive to the requirements of the Act. The irregularities which have come under notice were few and not of a serious character.

**MEDICAL TREATMENT OF SCHOOL CHILDREN.**—The regulations made by the Scotch Education Department as to grants to School Boards in respect of the medical treatment of necessitous school children during the year ending 31st December, 1917, state that grant will be paid on the basis of the approved expenditure of the local authority during the year. The Department will require to receive from the local authorities a proposed scheme of medical treatment for the period, accompanied by a detailed estimate of the cost on the prescribed form. The scheme and estimate should reach the Department not later than 1st November, 1916.

Where the proposals of the local authority are approved by the Department, a careful record should be kept during the year of the number and nature of the cases treated (distinguishing as far as possible the necessitous and partly necessitous

cases from any non-necessitous cases which may have been treated). A return will be required from the local authority before the grant is paid, giving *inter alia* this information, together with a detailed account of the expenditure (as well as of the receipts in non-necessitous and partly necessitous cases), and payment of the grant is conditional upon the receipt of this return on a form to be provided by the required date.

Where a scheme of medical treatment has been submitted in advance to the Department, approved by them as suitable and adequate, and carried out to their satisfaction, grant will be paid at the rate of one-half of the net expenditure; in other cases the Department may either pay at a lower rate or withhold grant altogether.

Where a local authority proposes to provide special premises for the purpose of medical treatment the annual charge on account of the provision of such premises may be included in the estimate submitted to the Department, but the Department will approve such expenditure only where the local authority is able to show that it is justified by the number of children for whom treatment must be provided in terms of the Act. Payment of grant under these regulations is subject to the fulfilment of the conditions laid down in the regulations; but if any of these conditions have not been fulfilled the Department may, nevertheless, where there are special circumstances which would justify it, pay such grant as they may think fit. In assessing grant the Department may disregard any items of expenditure which, in their opinion, should not be taken into account for the purpose of the assessment.

THE CONDITION OF HOUSING IN SCOTLAND.—Much attention has within the past few weeks been given to the subject of national housing, and to the opportunity for amelioration of existing conditions which the return of peace is likely to afford. In most of what has been said the state of matters in Scotland, and particularly in Glasgow, has assumed an unfortunate but not unnatural prominence. At the deputation of the National Housing and Town Planning Council and associated bodies to Mr. Walter Long, President of the Local Government Board, Mr. David Gilmour of the Lanarkshire Miners' Association, County Councillor George Fraser, Lanarkshire, and Mr. John



Robertson of the National Union of Scottish Mine Workers, spoke of the situation in Ayrshire and Lanarkshire. Mr. Robertson, speaking of the conditions under which a mining population was housed, gave an instance of a village in Ayrshire where there were 227 houses with only one ashpit; 50 per cent of the people had no closets; there were no washing-houses, and the household coal was stored under the bed. Taking the town of Hamilton, in Lanarkshire, he said the population was 38,000. The acreage occupied by dwelling-houses was only about 300, while connected with property adjacent to the town there were 2,500 acres of pleasure ground. Of the population, 27,000 lived in houses of one and two rooms.

Bailie J. Stewart, speaking as the representative of Glasgow, Edinburgh, Dundee, and Greenock, said that in all these places there was a shortage of houses, and in Glasgow there was a famine. The number of unoccupied dwelling-houses of rentals of £20 and under had decreased from 20,356 in 1913-14 to 3,763 at Whitsuntide, 1916, and it had been estimated by the health authority that there were 10,000 insanitary dwellings in Glasgow. That was a very serious state of affairs, which obviously cast increased expenditure upon the public health authorities. The scarcity of houses fit for human habitation stultified the efforts of the Corporation in exercising their powers, and was a constant menace to the health of the community. If the Corporation enforced their powers for closing these houses it would only accentuate the difficulty.

Mr. Long, in reply, said it was a very sorry story to be told in this year 1916. He agreed that the task before them lay at the root of all social reforms, and any assistance that it was proposed to give would be no good unless conceived on liberal lines. The Government did not in the least cavil at the declaration, made not for the first time, that progress should be made in the matter of housing in order to provide for the men when they come back from the war, when they would have a double claim upon the sympathies of their fellow-countrymen. When the war was over there would be great competition among advocates of all kinds of social reform, and at the root of those reforms lay the provision of houses. He therefore welcomed the deputation and bade them God-speed in their work. It would, indeed, be a crime—a black crime—knowing

as they did now of the sufferings which were the inevitable accompaniment of war in the shape of wounds and death—he meant that physical suffering from the horrible discomforts attendant upon trench warfare—it would be a black crime if they sat still and did nothing by way of preparation to provide these men with proper homes, to let them come from a water-logged horrible trench to something that was a little better than a pigsty. He could make no announcement then as to any particular sum to be allocated, and he was not even sure that the sum of £20,000,000 indicated what might really be required. He would, however, lay the whole case before his colleagues, and he could say for himself and the Secretary for Scotland that they would lose neither time nor opportunity in pressing forward the matter, not only in respect to housing but other schemes of employment which had been delayed through the war. They would not spare themselves in trying to bring about a real move for the provision of decent habitations for our people.

At the conference of the Sanitary Inspectors' Association at Cardiff housing formed one of the subjects of Sir James Crichton Browne's presidential address, in which he declared that housing reform would be the most vital amongst the social and domestic reconstructions that were to follow the war. The two effectual remedies for slumdom were a living wage and extensive building operations under the direction and, if need be, with the assistance of the State.

In a paper on "Health and Housing," Bailie J. Stewart maintained the thesis that ill-health arising from bad housing costs the nation and the communities more than would be necessary to remodel entirely the housing conditions for the people of the whole country. Taking Glasgow as typical of all our large industrial communities, he mentioned that if the actual density for each acre was given it would vary from nil to 55 for the well-to-do residential parts, to 300 or 600 per acre in the industrial districts, in some few parts exceeding 1,000 per acre. This latter tremendous density of itself constituted a very serious menace to health. Nearly 800,000 of the people lived in houses of three apartments or less, with results which, he submitted, were disastrous and costly. To-day the question of infantile mortality was receiving greater attention than ever



before. On the one hand we had an ever-increasing decline in the birth-rate, and on the other practically little or no diminution in the death-rate. As time went on we might expect to see a further decline in the birth-rate. Therefore, attention must be directed towards preventing babies from dying at the present rate. While the Notification of Births Act and the Midwives Act would ameliorate and improve the conditions for children of five years and under, he believed that in so far as they were dealing with and not getting at the main cause, the results would prove disappointing. There was the startling fact in respect to Glasgow that in one district the rate of mortality of children under one year of age was two and two-third times higher than in a certain other district. The housing question required to be tackled. The cottage was preferable to the tenement, and every house should have a garden, while four apartments should be the minimum for an average family. Private enterprise in the building of such houses had broken down. Local authorities were frightened at the magnitude of the problem, and he thought we ought to have a Minister of Health whose duty it would be to deal with the question in such a way as would promote the best interests of the nation. He suggested that the Government should make grants of about £30,000,000 per annum for some years to local authorities to enable them to erect houses, charging such a rent as would pay the cost of maintenance and repay by sinking fund the capital cost in sixty years.

The President entered a protest on behalf of Glasgow, which had had to contend with tremendous difficulties. Whatever evils might remain, no city in the world had made a more splendid contribution to sanitary science.

Mr. Kershaw, Hampstead, urged that public health administration was not a parochial but a national affair. Until we got a Minister of Public Health and the question was tackled on national lines the sanitary inspector would not get the opportunity he deserved. The keynote of this conference was housing, and housing was a matter which must go forward. One of the greatest causes of failure in housing reform was that where councils carried out housing schemes they did not re-house the people whom they had displaced. They set up model dwellings and insisted that the tenants should be clean,

honest, and respectable and have no encumbrances. What was the effect of this policy? The council got the best tenants; they never lost any rent; but they left the slum landlord to deal with the tenant who was the problem that perplexed all sanitarians.

It is supererogatory to say that the existence in Glasgow at the present day of such a condition of affairs as is revealed in the statement of Bailie Stewart is a crying scandal, which the apologia of Sir James Crichton Browne does little or nothing to mitigate. There is no greater hindrance to progress than the habit at looking complacently at what we have done. If we look, for a salutary change, at what we have left undone, as Bailie Stewart shows it to us, we may be startled and shocked into amendment, or at least into an endeavour to amend; but local effort, unfortunately, is not enough. There have been many local efforts, and prophets of more than local reputation have denounced the evil to our face. It was about thirty years ago that John Bright devoted a famous rectorial address, based upon information supplied him by the late Dr. J. B. Russell, to an exposure of the evils of the housing of the Glasgow poor and to an appeal for betterment. Thirty years ago his grave and compassionate eloquence touched the hearts and shamed the consciences of those who heard him, and must have left a deep and enduring mark on many a young mind among his audience; yet to-day it is necessary to repeat an almost identical reproach. Slum properties indeed have been destroyed; partial attempts have been made by the Corporation to provide suitable workmen's houses; but local effort has left the root of the evil untouched. It is the most encouraging feature of the debates of the Sanitary Inspectors' Association that almost every speaker insisted, like Mr. Kershaw, upon the national aspect of the problem; and it is the most encouraging feature of the deputation to the Local Government Board that Mr. Long, speaking for the Government, not only fully recognised Governmental responsibility, but was apparently prepared to accept large monetary obligations.

Within the last few days a beginning of a Government scheme has even been made in Lanarkshire. At the statutory October meeting of Lanark County Council, held on 12th October in Hamilton, particulars were given by the Finance



Committee of a proposed new housing scheme. In a letter from the Local Government Board with reference to the provision of housing accommodation in the middle ward district, it was stated that the Minister of Munitions was considering the erection of houses in Cambuslang and Carmyle districts. Before deciding to proceed he wished to be informed upon the question of ownership after the war of such houses as he might direct to be built. It had been suggested; the letter further stated, that these houses, and such others as might be erected, might with advantage be taken over by the local authority, at a date after the war to be fixed, and at a valuation to be settled by a valuator agreed upon by both parties. The Middle Ward District Clerk replied stating that the Board's communication had been submitted to and considered by the District Committee, who had resolved to recommend that an arrangement be entered into with the Minister of Munitions under which the county authorities should acquire such houses as the Minister might erect in the Middle Ward district, and as might previously be agreed upon between parties on the lines generally indicated in the Board's communication. The Finance Committee recommended the County Council to approve generally of the proposal, but subject to the adjustment of details of the scheme and to satisfactory conditions and arrangements being made as to the basis of acquisition.

The recommendation was approved by a large majority, and the matter was remitted to the Finance Committee with full powers.

Arising out of a temporary need, the proposed arrangement is apparently designed to result in the permanent acquisition by the Local Authority of the houses it is intended to build. It is local in its scope, and the measure of Government responsibility is limited by the duration of the war; but it does seem to indicate at least a tentative practical recognition of that responsibility which Mr. Long so readily accepted in principle. We must await with what patience we may the announcement of the Government's matured decision, realising the greatness of its opportunity, and hoping that it will rise to the measure of it. But the opportunity will not recur. The hearts of men are warm now to their brothers and defenders, and their hands are open. Is the great national impulse to result in generous deeds,

or is it to grow colder by delay, and to end as did the impulse given by John Bright?

SANITARY ASSOCIATION OF SCOTLAND.—The annual congress of the Incorporated Sanitary Association of Scotland was held this year in Edinburgh, the proceedings being opened with the annual meeting on 6th September, when Dr. Alexander Robb was elected president in succession to Mr. Robert Lambie. The meeting was followed by a lecture on the Hairmyres Colony scheme for the treatment of tuberculosis, delivered by County Councillor George Lambie, of the Middle Ward of Lanarkshire. The point on which he specially insisted was after-care of the patient on leaving the sanatorium, and it was on this that Dr. J. C. M'Vail dwelt in moving the vote of thanks. To him the outstanding feature of the Middle Ward organisation was the self-contained character of the whole scheme. After-care committees, said Dr. M'Vail, were admirable devices, and there was a fine field in front of them when they could be properly brought into existence throughout the country after the war. One of their main duties would be to search for suitable work for cured or arrested cases of tuberculosis; and they would find that a particularly difficult task. They would probably discover that many employers of outdoor labour saw obstacles in the way of providing occupation for the tuberculous. There would be, in the first place, the fear of infection of other employees, and even if the employer himself realised how that risk might be prevented, his employees might be hard to educate. There would also be difficulties as to the housing of the discharged, and in some cases with regard to the arrangements for cooking and the particular kind of work that they were best qualified to do, and the remuneration for that work. During the present summer a small unofficial committee—made up from the Board of Agriculture for Scotland, the Local Government Board, the Insurance Commission, and the Labour Exchange—had been endeavouring tentatively to devise arrangements for bringing together, in respect of cases discharged from sanatoria, the employer and the employee. That committee had been meeting with all these difficulties. But this scheme was essentially self-contained. The Middle Ward Committee would themselves be the employers, and they



would have no need for endeavouring to remove the scruples which ordinary employers might feel on the subject. It was true, of course, that the large population of the Middle Ward and its high valuation placed it at an advantage as compared with most local authorities in working out a scheme of this sort. Dr. M'Vail trusted that it might be possible for others to do what the Middle Ward was doing, and already there were indications of action elsewhere on more or less similar lines.

The congress proper opened on the following day, Lord Provost Sir Robert Inches welcoming the Association and the members to Edinburgh. Dr. Robb's presidential address was devoted to the question of hospital economy, a subject which would have to be considered in view of the economic exhaustion which would follow the war. A discussion of infant and maternal welfare schemes, under the Notification of Births (Extension) Act, was introduced by Dr. J. W. Ballantyne in a paper on "The care of the mother before the birth of her child." Sir Halliday Croom and Dr. J. Haig Ferguson took part in the discussion. Miss Mary E. Cairns read a paper on "The place of the midwife in infant welfare schemes," and Mr. John Halliday one on "The unregenerate and the degenerate parent." Mrs. Leslie Mackenzie discussed "The linking up of child welfare schemes with schemes of school medical inspection and treatment," in which connection Dr. Grace Cadell protested against the constant interference of officials, often young and inexperienced, with mothers. Sir George T. Beatson, with whom Dr. M'Vail expressed his agreement, pointed out the necessity for a central association, with affiliated or branch committees, for carrying on instruction in infant hygiene and feeding, so as to furnish a good supply of suitably qualified teachers; and Mr. James R. Motion contributed a paper on the care and maintenance of orphan children of soldiers and sailors.

The concluding day's proceedings opened with a paper by Dr. Ernest Watt on "The home or domiciliary treatment of tuberculosis;" Dr. G. Clark Trotter, Paisley, discussed "The tuberculous casual;" and Mr. M. E. Whyte spoke on farm colony schemes, Dr. H. J. Rae, Mr. William Jones, and Dr. W. F. Brown taking part in the discussion. Councillor W. Graham, Edinburgh, in the afternoon introduced a debate on "War and

the economic aspects of the housing problem," giving statistics for infantile mortality in Edinburgh comparable with those supplied for Glasgow by Bailie Stewart, to which reference is made on another page. Mr. M. E. Whyte, Mr. W. R. Young, Mr. Peter Fyfe, Councillor Wheatley, and Mr. J. W. Smith took part in the discussion, and the congress was then closed.

STATE REGISTRATION OF NURSES.—At a meeting held in the Christian Institute, Glasgow, on 14th September, under the presidency of Lord Inverclyde, Mr. Arthur Stanley, C.B., M.P., delivered an address explaining the objects of The College of Nursing (Limited), an institution founded to organise the nursing profession; to secure State registration for the trained nurse; to make and maintain a register of trained nurses and to protect their interests; to raise and maintain the standard of training; and to establish a uniform curriculum and examination.

There was a large and representative attendance of nurses, and among others present were—Professor Glaister, Colonel D. J. Mackintosh, M.V.O; Lady Stirling-Maxwell, Sir Matthew Arthur, Dr. M'Cubbin Johnston, Dr. Ebenezer Duncan, Dr. Maxtone Thom, Miss Gill (matron Edinburgh Royal Infirmary), Miss Melrose (matron Glasgow Royal Infirmary), Miss Gregory Smith (matron Glasgow Western Infirmary), Miss Campbell (matron Glasgow Victoria Infirmary), and Colonel J. A. Roxburgh.

The chairman, in introducing Mr. Stanley, said that they might congratulate themselves that the time was near at hand when the registration of nurses would come into force.

Mr. Stanley proceeded to explain the objects of The College of Nursing (Limited), and said that one of their first duties would be to draw up a list of recognised training schools, and then they would insist that the training given in these schools and the certificates granted bore something like the same value. He had been told that the question of State recognition was one upon which nurses were divided. That was not the case. Nurses were almost unanimous in their desire to obtain from the State that recognition to which the profession was entitled. Registration was necessary in the interests of *bonâ fide* nurses as against those impostors who made the most of their



imposture. It was also necessary for the protection of the public. It was quite clear that the Council of the College would have to consider questions relating to the curriculum, to the standard and length of training, and to examinations. These were questions which vitally affected the profession, and if the College was to possess any influence it was obviously necessary that it should at once begin to enrol nurses. They had made a close time of three years, and any *bonâ fide* nurse could have her name placed on their register. Those whose names were placed on the register now would not have to face any further examination. These were the conditions of registration as they existed at present; what they would be after the lapse of three years it would be for the College to determine. It was obvious that it would be of immense advantage to have a large and powerful central body to control the destinies of the profession, and to assist the members in every possible way. When a nurse paid the fee for registration, one guinea, her name was put on the register, and she became a member of the College, and had no more payments to make. He hoped that an indulgent public would help them to provide some of the funds which would be required for the running of the College. Up till the present time he had asked only four people to help—one subscribed £200, another £500, a third £1,000, and a fourth 1,000 guineas. He could not tell what form the Scottish constitution would take, but what they aimed at was to have an autonomous body in Scotland represented on the Central Council in London.

In regard to the Registration Bill, he pointed out that there had been a good many registration bills. They had been in consultation with those responsible for the present Bill, and had practically adopted it. It had been put in somewhat different form after obtaining the advice of Parliamentary counsel, and they wished to settle as much as possible of the controversial matter amongst themselves and out of Parliament. He hoped they would go to Parliament as a united body, with an agreed Bill, and that would assure almost certain success. They desired to have a very large amount of support from nurses, and the only way nurses could help them was by registration. If they could obtain the registration of 10,000 nurses before they went to Parliament (and he hoped they

would be able to go next month), then he was not without hope that the Government might look upon the Bill as a measure that ought to be passed before the war was over. With a strong united body they would be able to make their voice heard not only in the councils of the nation, but in the councils of the whole British Empire.

DUNOON CONVALESCENT HOMES.—The forty-seventh annual meeting of the Glasgow and West of Scotland Convalescent Seaside Homes, Dunoon, was held on 4th September in the Religious Institution Rooms, Glasgow, Sir John Ure Primrose presiding. In his speech from the chair Sir John said that the cost of administration had been singularly good in such times as the present, and the average cost of food, in view of the phenomenal, and he thought in some respects unjustified, price of provisions was creditable in the extreme. That the total cost per patient, including housing, feeding, and administration, was something over 17s. was, he thought, a creditable record and quite worthy of the care with which the institution had been conducted in the past. In every aspect of curative effort the institution continued to make progress. The home in all its equipment was a model for all similar institutions. Mr. Alexander Wylie, who moved the adoption of the report, expressed the hope that as many convalescent soldiers as possible would take advantage of the beds placed at the disposal of the Red Cross Society for wounded soldiers. The Right Rev. Dr. John Brown, Moderator of the General Assembly of the Church of Scotland, who seconded, expressed sympathy with the class of people whose incomes were small and stationary, and who had to face the awful increase in the cost of living. These were the people to whom the homes were administering, and their work was all the more necessary at this time, because these people were exposed to disease and hardship. Sir John Wilson, in supporting the adoption of the report, appealed for an increase in workmen's contributions. He said that miners were making very large wages, but all that they gave in support of charitable institutions was a deduction of a halfpenny, and in some cases a penny per week. He was making efforts to get the miners to double their contributions. The report was adopted.



## REVIEWS.

*A New Treatment for Gonorrhœa.* By CHARLES RUSS, M.B. Lond., M.R.C.S.Eng., L.R.C.P.Lond. London: H. K. Lewis & Co., Ltd. 1916. (3s. net.)

*A New Treatment for Gonorrhœa* is a booklet of some forty pages, one half of which is taken up by a useful discussion of the disease and the ordinary methods of treatment. The remainder is devoted to a description of the author's electrolytic treatment and considerations connected with it. His method, which is a modification of that published in the *British Medical Journal* for 12th June, 1915, is briefly the following:—

The positive electrode is a stylet of platinum wire inserted in a catheter which has numerous perforations, and is fitted with a rubber collar which just enters the meatus. A specially prepared pad soaked in a warm saline solution is applied to the perineum and external genitals, and connected to the negative pole of the battery. Into the catheter a 2 per cent solution of sodium iodide (containing  $\frac{1}{10}$  per cent iodine) is injected. A current of 1 to 3 milliamperes is passed for ten minutes in the direction indicated, and continued for a further ten minutes in the reverse direction.

The author has treated more than seventy cases (males only) of gonorrhœa by electrolysis, and believes the advantages of the method to be—(1) Limitation of the inflammation to the anterior urethra; (2) absence or rarity of arthritis, ophthalmia, and epididymitis; (3) comparative rapidity of the cure; (4) a painless procedure.

Yet we are not convinced that the treatment of gonorrhœa by electrolysis has reached the stage when it can be declared worthy to supersede all other methods. Ten to twenty-two applications of the process in the acute stage, helped by the use of santal oil after a time, do not suggest much improvement

on the remedial value of some well-known methods of treatment.

With reference to the method itself, it may be pointed out that no experiments seem to have been made on the separate effect of the liquid, employed as an electrolyte, used simply as an injection. The contribution of the current to the total effect is thus left wholly in doubt. Further, improved results, attributed to reversal of the current, are claimed, yet reversal seems to us not consistent with the theory that the efficacy of the process is largely due to the migration of gonococci to the anode.

There seems to be some confusion in the later paragraphs of page 31 with regard to the direction of the current, if the usual convention is accepted.

Although we do not commit ourselves to a belief in the superiority of the author's treatment, we nevertheless recommend the book on the ground that new applications of science to medical practice should be known so that the practitioner may judge for himself as to their value, or even assist in their further development.

---

*Alcohol and the Human Body.* By Sir VICTOR HORSLEY and MARY D. STURGES, M.D. Fifth edition. London: Macmillan & Co., Limited. 1915. (1s. net.)

THIS volume is written not so much for the medical man as for the lay reader. To the medical man, however, it makes a special appeal. It is of interest to the clinician, to the mental expert, as well as to the public health official. After describing in detail the various forms in which alcohol is consumed, the action of alcohol on the various systems of the body is considered; then the action of alcohol on metabolism generally, with special reference to the effect on young children, is dealt with. The influence of parental alcoholism on the race, alcohol in tropical conditions, and alcohol in the Services receives consideration, while Dr. Newsholme contributes a chapter on Alcohol and the National Health. Written in simple language and appealing to the reason of the reader by observed facts, in some cases by experimental results, and in others by statistical investigations, the conclusion is borne in on one that the effect



of alcohol both on the individual and on the race is injurious. We can cordially recommend this book to all medical men.

---

*Our Baby: for Mothers and Nurses.* By Mrs. J. LANGTON HEWER. Fifteenth Edition. Bristol: John Wright & Sons, Limited. (Stiff covers, 1s. 6d. net; limp, 2s. 6d. net.)

WHEN a book has reached its fifteenth edition, with a total issue of one hundred and twenty thousand copies, a review of it is hardly necessary. The whole work has been thoroughly revised and brought up to date. Fuller information is given in regard to the care of the expectant mother's health, and this is of the greatest importance. By the new Act which has come into force, local authorities have to make provision for the care of expectant mothers, so information such as is given in the book will be of great service to nurses who are working under these authorities. The book's success is its best commendation.

---

*The Medical Who's Who.* 1916. London: The Fulton-Manders Publishing Co. 1916. (10s. 6d. net.)

BEGINNING its career in 1912 with an issue of some 300 pages, the *Medical Who's Who* has rapidly grown in bulk and comprehensiveness, until with the present issue it has nearly quadrupled its original size. It includes the names and brief biographies of the greater number of members of the medical profession in this country. It indicates by an asterisk those who are on active service; and it gives an obituary list for the previous year, and for the first two months of 1916, distinguishing by a special mark those who have died for King and country. The impression, at one time fairly general, that the volume was to consist of a selected list of practitioners, would seem to have deterred many from returning the form sent to them; but it should be dispelled by the statement of the editors that they include in it the names of all members of the medical profession who make returns. For those who desire

information supplementary to that published in the *Medical Directory*, the present publication will be found to be eminently useful.

---

*Human Motives.* By J. J. PUTNAM, M.D. London: William Heinemann. 1915. (5s. net.)

*Sleep and Sleeplessness.* By H. ADDINGTON BRUCE. London: William Heinemann. 1915. (5s. net.)

*The Meaning of Dreams.* By ISADOR H. CORIAT, M.D. London: William Heinemann. 1915. (5s. net.)

THESE three volumes are the first of the *Mind and Health Series*, which in the words of its editor, Mr. Addington Bruce, is "designed to extend knowledge of the important discoveries affecting individual and social welfare that have been made during recent years through psychological research." All of them deal in great part with the exploration of the subconscious mind, an exploration which is becoming so common nowadays that in some minds it may raise a suspicion of exploitation, and all of them are more or less concerned with the exposition of Freudian doctrines. Of these Dr. Coriat is the most convinced exponent, and his whole scheme of dream-interpretation is undiluted Freudism. He accepts even the "Œdipus-complex" without criticism; but in spite of, or perhaps even because of, his uncritical advocacy his book will be found a useful semi-popular account of the methods of psycho-analysis. Mr. Bruce's study of sleep and sleeplessness naturally also devotes a considerable space to the subject of dreams, and thus the two volumes somewhat overlap. But Mr. Bruce's spirit is more critical, and he brings to the subject of prophetic dreams a healthy scepticism with regard to spiritualistic claims. His observations on the treatment of sleeplessness have much practical value. Dr. Putnam's endeavour is to show from a study of the instinctive desires that have arisen in the course of evolution, and of the motives which have grown out of social relationship, that a religious standard of motive is not only the highest but the most rational. If not very profound, his book is thoughtful and stimulating, and indicates the help that may be afforded to the study of motive from the psycho-analytic side.



## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

---

EDITED BY ROY F. YOUNG, M.B., B.C.

---

### OBSTETRICS AND GYNÆCOLOGY.

**Pneumo-Peritoneum.** By J. D. Malcolm (*Proceedings of the Royal Society of Medicine*, Obstetrical and Gynæcological Section, June, 1916).—The author relates a second case of this affection occurring in his practice. The patient was a woman, 38 years of age, who had suffered from attacks of abdominal pain. At operation the peritoneum had a sodden appearance suggesting a mild peritonitis, but the coils of intestine were not adherent. The outer parts of both tubes, the left ovary, and the vermiform appendix were removed. On the third day the abdomen began to swell, and by the seventh day it was greatly distended, and a diagnosis of partial obstruction was made. An incision was accordingly made in the right groin with a view to draining the cæcum should it be found distended. The abdominal wall was so distended as to be bloodless, but this condition passed off when the incision was made, for the gas escaped suddenly leaving the wall collapsed and no longer anæmic. The patient ultimately did well, and made a complete recovery.

The previous case was one of a woman of 60, in whom a pelvic abscess followed an operation for removal of a malignant rectum. When the abscess was evacuated a large quantity of odourless gas was liberated which had caused excessive distension of the abdomen.

In both these cases there was no vomiting, and the bowels acted in response to medicine. With a similar distension due to flatus inside the bowel there is always vomiting, and after a time the bowels will not act. This in itself should lead to a diagnosis. The gas was clearly not due to ordinary putrefaction, nor could it have come through an opening in the intestine, for that would have allowed the passage of organisms which would, in the time, have caused a fatal peritonitis. It is unlikely that the gas could pass through the uninjured intestinal wall, and the mere enclosure of air at the time of the operation, as has been suggested, could not account for its enormous increase.

It seems probable that the *Bacillus aerogenes capsulatus* was the cause of the gas formation, and it can exist in the body without causing symptoms unless some part be injured or the body die, when gas is rapidly produced.

Dr. Mc'Cann related a similar case where he simply opened the abdomen and

stitched it up with catgut, as the disease was found to be inoperable. The wound healed at once, but twelve days after operation the abdomen became much distended, and on the eighteenth day a small incision evacuated a large quantity of odourless gas. Dr. M'Cann suggests that the *Bacillus aerogenes capsulatus* may have been in the catgut.—E. H. LAWRENCE OLIPHANT.

**Birth Control** (*Surgery, Gynecology, and Obstetrics*, August, 1916).—At a joint session of the Chicago Gynecological and Medical Societies several medical men and women took part in a discussion on the subject of control of the birth-rate from the medical point of view. The discussion was opened by Professor Field, of Chicago, who read a paper on the history of the subject from the time of Malthus, who published his first essay in 1798 anonymously. In this it was contended that population tends to increase more rapidly than the means of maintenance, and so misery and vice inevitably result. In later editions he recognised a possible escape by moral restraint or postponement of marriage (as Dr. Chalmers maintained later). The utilitarians, James and John Stuart Mill, with Grote the historian, did not shrink from the proposition that marriage might be early if the increase in the size of the family were limited, and this was advocated strongly by Place, himself a working man hampered by an early marriage and fourteen children. His work, *Illustrations and Proofs of the Principles of Population*, was published in 1822. Leaflets came to be distributed among the working classes, and these "diabolical handbills" soon caused much outcry among the Tories generally. The discussion which followed led to the publication of important pamphlets, such as Richard Carlisle's *Every Woman's Book* and Owen's *Moral Physiology*. The first noteworthy pamphlet by a medical man was the *Fruits of Philosophy* by Dr. Knowlton, of Massachusetts, published in 1833. Dr. Knowlton seems to have been a crank and a sexual hypochondriac, but his work soon became partially known among the working classes in this country, till it was boomed into notoriety by the famous prosecution in 1876.

In 1854 Dr. George Drysdale published anonymously a work in which he maintained that the physical functions of man, including the sexual, were of equal dignity and importance to the mental. This *Elements of Social Science* was a literary crusade against what Drysdale considered the correlated evils of poverty, prostitution, and celibacy; only by the prevention of conception could society escape all three evils. In 1876 a bookseller in England was convicted of selling an indecent book on account of his having published Knowlton's work already mentioned. This was taken up as a suppression of the right of free discussion, and Bradlaugh and Mrs. Besant challenged the verdict by republishing the work. Their prosecution and conviction made the book notorious, though the conviction was quashed on technical grounds. This trial brought into prominence the Malthusian League, which in turn led to the formation of similar leagues in Holland and other European countries, and now organised or unorganised the movement is world-wide. It seems probable that the prosecution of 1876 led to the formation or revival of this movement. *Post hoc* or *propter hoc* the English birth-rate began to fall abruptly in 1878, and similar declines in all civilised countries have followed the distribution of neo-Malthusian leaflets. In any case every attempt to suppress the movement has given it fresh life. The limitation of families, for good or evil, is practised all the world over, and according to Dr. Field the physician's work is to find a place for it among



civilised discoveries, and meanwhile to discuss it in a dignified way in all its bearings.

Dr. Rachelle Yarros, of Chicago, mentioned some of the objections which had been urged, and admitted the complexity of the subject. To the religious argument no answer was possible, so both sides must agree to differ; the moral objection begs the question; the present conditions are immoral, and checks to conception would probably reduce the number of "criminal abortions." The definite change in the attitude of woman in regard to her own function and place in the social order is a factor to be reckoned with, whether we agree with it or not. The different question of abortion must not be ignored, but must be faced honestly by the profession, for to ignore it is but to play into the hands of quacks and abortion-mongers.

Dr. Alice Hamilton had studied the Malthusian movement in Europe. She found there were neo-Malthusian leagues for teaching the deliberate restriction of the birth-rate in Great Britain, Holland, Belgium, Germany, France, Bohemia-Austria, Switzerland, Spain, Sweden, Italy, Portugal, as also in Cuba, Brazil, and the United States. These have united to form a *Fédération Universelle*, which has held three international meetings, while a fourth was prevented by the European war. Their teaching condemns the practice of abortion, and it is claimed that the prevalence of abortion in the United States is due to the suppression of discussion of checks to conception. The success of the movement is said to be shown not by the numbers of open adherents, but by the fall of the birth-rate in every highly civilised country in the last half century.

Dr. Anna Blount quoted statistics to show that the graduate of Harvard produced on an average only three-quarters of one son, while among the feeble-minded in America the production was eight. She was of opinion that if the propaganda of birth control became universal it would be necessary to start a crusade for voluntary motherhood.

Dr. Holmes thought it necessary to point out that a result of the league teaching would be that the intelligent would use checks, and the moxon would not; so that the State would have to step in and sterilize the moxons, male and female.

Dr. Frances Dickinson stated that the Harvard graduate was comparatively unfertile on account of the prevalence in that class of gonorrhœa, which was much more common than in working men.

Dr. Robert L. Dickinson read a long paper, which is illustrated, on methods of sterilising women who are suffering from such disease as tuberculosis. He advocates cauterising the inner ends of the tubes in the cornua. His technique, briefly, is to apply the cautery without pressure to the outside of the cervix, measuring the time, accurately, required to produce a slough; using the same current, cauterise the tubes in each cornu. Observe the separation and cicatrization of the cervical slough, and when it is complete test the impermeability of the tube by x-ray after injection of silver solution under pressure into the uterus. The time for operation should be about nine days after the period when the mucosa is least vascular.—E. H. L. O.

---

## ANÆSTHETICS.

**Observations on the Influence of Anæsthetics on the Temperature of the Body.** By M. S. Pembrey and F. E. Shipway (*Proceedings of the Royal Society of Medicine*, Section of Anæsthetics, May, 1916).—The authors advocate that warm vapour anæsthesia with chloroform, and especially ether, gives better results than if unwarmed vapours are used. The apparatus they use is a regulating one, by means of which the warmed vapours of ether, chloroform, or mixtures of chloroform and ether in any desired proportion, can be given, and in concentration suitable for any operation. The dosage is practically constant, and the anæsthetist is more out of the operator's way than when he is using a drop bottle. The anæsthetic is pumped by a hand bellows, such as in Junker's Inhaler, through water in a flask, the water being at a temperature of anything up to 135° F.; the flask is a thermos one, and retains its heat. After passing through the warmed water the vapour is conveyed by a rubber tube to an open mask of the Schimmelbusch make, the same being covered either with two layers of domette or about twelve layers of gauze. With this means, the temperature under the mask through which the patient is breathing is about 89·6° F., whereas with cold ether it varies from about 48° F. to 78° F. The authors claim that the advantages of the warm vapour are—

1. Warm vapours are less irritating and are absorbed more quickly, so that induction is quicker and accomplished with less excitement, whilst the anæsthetic effect is increased.
2. Breathing is calmer, and the secretion of mucus is lessened, especially when using ether.
3. Lastly, the chief advantage of warm vapours is that there is less shock due to the diminished loss of heat.—J. P. BOYD.

*Books, Pamphlets, &c., Received.*

- The Story of a Red Cross Unit in Serbia, by James Berry, B.S., F.R.C.S., F. May Dickinson Berry, M.D., B.S., W. Lyon Blease, L.L.M., and other Members of the Unit. London: J. & A. Churchill. 1916. (6s. net.)
- Saint Bartholomew's Hospital Reports. Vol. LI. Edited by F. W. Andrewes, W. M'Adam Eccles, G. E. Gask, W. D. Harmer, H. Thursfield, H. Williamson. London: Smith, Elder & Co. 1915.
- Studies from the Institute for Medical Research, Federated Malay States. No. 13: The Bacteriology of Dysentery in Malaya, by Henry Fraser, M.D. Singapore: Kelly & Walsh, Limited. 1916. (3s. 6d.)
- Principles of Diagnosis and Treatment in Heart Affections, by Sir James Mackenzie, M.D., F.R.S. London: Henry Frowde and Hodder & Stoughton. 1916. (7s. 6d. net.)
- The Influence of Joy, by George Van Ness Dearborn. London: William Heinemann. 1916. (5s. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDED 21st OCTOBER, 1916.**

	WEEK ENDING			
	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.
Mean temperature, . . .	51·0°	49·6°	51·7°	43·5°
Mean range of temperature between highest and lowest,	9·3°	7·7°	5·5°	9·1°
Number of days on which rain fell, . . . . .	0	6	7	3
Amount of rainfall, . ins.	0·00	1·80	2·65	0·31
Deaths (corrected), . . .	307	329	309	287
Death-rates, . . . . .	14·7	15·7	14·8	13·7
Zymotic death-rates, . . .	0·2	0·3	0·2	0·3
Pulmonary death-rates, . .	1·2	1·6	1·6	1·4
DEATHS—				
Under 1 year, . . . . .	70	81	58	68
60 years and upwards, . .	83	90	87	81
DEATHS FROM—				
Small-pox, . . . . .	...	...	...	...
Measles, . . . . .	3	3	2	...
Scarlet fever, . . . . .	2	2	3	2
Diphtheria, . . . . .	3	5	2	4
Whooping-cough, . . . .	...	2	...	...
Enteric fever, . . . . .	...	1	...	2
Cerebro-spinal fever, . . .	1	...	2	...
Diarrhoea (under 2 years of age),	35	44	16	17
Bronchitis, pneumonia, and pleurisy, . . . . .	32	52	49	35
CASES REPORTED—				
Small-pox, . . . . .	...	...	...	...
Cerebro-spinal meningitis, .	2	1	3	...
Diphtheria and membranous croup, . . . . .	25	26	31	27
Erysipelas, . . . . .	14	25	27	23
Scarlet fever, . . . . .	75	73	69	81
Typhus fever, . . . . .	1	...	1	...
Enteric fever, . . . . .	2	7	7	7
Phthisis, . . . . .	45	48	46	44
Puerperal fever, . . . .	3	2	2	1
Measles,* . . . . .	48	42	62	58

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

---

No. VI. DECEMBER, 1916.

---

ORIGINAL ARTICLES.

---

OUTDOOR OCCUPATIONS FOR TUBERCULOUS  
CASES.

By JAMES W. ALLAN, M.B.,

Physician-Superintendent, Bellefield Sanatorium ; late Physician, Glasgow  
Royal Infirmary ; formerly Physician-Superintendent,  
Belvidere Fever Hospital.

ONE great defect in our anti-tuberculosis schemes is the difficulty of finding suitable and remunerative outdoor occupations for the patients who leave the sanatorium with the disease "apparently arrested," or at least so improved in health as to be able to do some work. We wish to find for them work in the open air, and at the same time work which will bring them wages sufficient to secure good nourishment and comfortable quarters. But the difficulty is that most of these persons are unaccustomed to rural labour, and consequently their unskilled work will be poorly remunerated.

An unmarried man with no family responsibilities may be content to spend some years at work which merely secures



for him the necessities of life, in the hope of completely recovering his health. But the case of a married man with a family is very different. With him the earning of a good wage is essential, and if he has been, for example, a skilled mechanic earning a big wage he recoils from the prospect of undertaking some humble form of outdoor work which will be poorly paid. And the psychological element cannot be overlooked. If the man undertakes such work he will be apt to suffer from depression of spirits due to his altered circumstances, and this depression will militate against the recovery of his health. Further, a townsman, especially if he has reached middle life, will not, as a rule, take kindly to country life.

The chances are that if the skilled mechanic of the town is transferred to the country and poorly paid field work he will soon tire of it and long to return to the city and to his well paid trade; and if he has a family he will argue that it is his duty to do so, and he will be apt to put considerations of health aside.

The following notes are an attempt to review the various occupations most worthy of consideration. And in the first place let us look at three of them which have been strongly advocated as suitable for the class of persons under consideration, viz.:—

- I. Farming.
- II. Gardening.
- III. Afforestation.

#### I. FARMING.

Genuine farming work is at times very hard and is often conducted under unfavourable atmospheric conditions. Further, it is work which is best borne by persons who have been accustomed to it from early youth. Much of it requires strength and skill.

No doubt young patients might be trained to it if they were not pushed too hard at first, if they were allowed time to get accustomed to the heavy labour, and, in a word, if some consideration were shown to them.

But I am afraid that the average farmer—keen to make profits, or it may be striving to make ends meet—would be rather impatient of employees of this class.

In exceptional cases, on large thriving farms with plenty of hands and a kindly sympathetic master, "soft jobs" might be found for the novice till he got a bit hardened to the work. But you cannot take a man in middle life—say a clerk, or plumber, or grocer—and set him to ploughing and sowing and reaping with any prospect of success. The man whom you watch with admiration driving the plough over a wide stretch of field has been accustomed to grip the handles since he was a lad, and now he performs the work almost automatically.

And the management of horses is a matter which must be acquired early in life. No farmer would trust the care of valuable and high-spirited horses in the hands of a man fresh from an office stool or a mechanic's bench; it would be risky alike for man and horse.

The ordinary farm servant must be prepared to toil under a broiling sun, and he must not be afraid of the east wind or of getting a soaking with rain.

A good proportion of the patients who leave the sanatorium "much improved" and "apparently arrested" are, in my opinion, fit to undertake *some forms* of farm work, such as lifting turnips and loading them into a cart, driving a reaping machine, hoeing, assisting at harvest work, repairing fences, and so on. But the business farmer wants a man who can tackle all sorts of farm work, light or heavy.

Of course, if a tuberculous convalescent has farming friends who will permit him to work about in a quiet way, and give him good nourishment and plenty of time to take it, he may do very well.

To sum up regarding farming work—I think that under favourable circumstances and with reservations it offers a field to the tuberculous convalescent, and I am of opinion that the well-planned farm colony under skilled and experienced medical supervision gives the best prospect of success.

Of course dairy work is *taboo* when tuberculosis is concerned. No conscientious farmer would knowingly employ a phthisical person as a milker or dairy-maid, and no medical officer would permit such a thing. Even if the individual were entirely free from cough and expectoration, I am afraid the mere "suspicion" would be enough.



## II. GARDENING.

Let us now consider gardening, another occupation which has been recommended for the class of persons at present receiving our attention.

"Gardening" is a term of pretty wide application. In a large garden, such as we find attached to gentlemen's houses, the work involves digging, raking, planting-out, transplanting, pruning, grafting, weeding, lawn-mowing, and other outdoor labour, but it also usually includes work under glass in hot-houses and conservatories, and this part of it means the breathing of a stagnant and more or less hot and moist atmosphere, just the sort of atmosphere which is considered undesirable for a phthisical subject; and the gardener may have to leave this warm atmosphere and go to work outside in a bitter east wind, and the hothouses may require to be visited late at night and early in the morning to regulate the temperature.

If, however, we confine our attention to the outdoor work alone, it must be admitted that gardening offers some forms of occupation suitable for our tuberculous convalescents if they have sufficient muscular strength. There is, however, much digging to be done, and digging is hard work.

Skilled gardeners usually get good wages, but tuberculous convalescents could only expect to be employed as gardeners' assistants or labourers. Gardening is a trade requiring skill and training; a man must serve an apprenticeship to it.

Market gardening and fruit culture seem to offer a fair field. Perhaps exception might be taken to fruit and vegetables which had been touched by possibly tainted fingers, but in the absence of cough and spit, and with strict personal cleanliness, perhaps the danger of infection might be regarded as a negligible quantity. (If the public saw the class of persons commonly employed in fruit picking in a busy season, I fancy their "relish" would be considerably impaired.)

Tomato culture is now extensively carried on in this country, but, in my opinion, it is quite an unsuitable occupation for the class of people under consideration. It means work under glass in a close, warm, moist atmosphere.

Patients at Bellefield engaged in graduated labour have had some work which might be classed as that of a gardener's labourer—weeding, wheeling and laying ashes on pathways, and grass cutting—and I have seen how they improved in health and strength from such exercise in the open air. But the spell of work was short, and they were not asked to work in very hot weather or under rain; and if they perspired freely they had baths at their command, and could make themselves comfortable.

The conclusion regarding gardening as an occupation for phthisical subjects seems to be that some parts of the work are suitable for them.

### III. AFFORESTATION.

The planting of trees is another occupation which has been considered well adapted for tuberculous convalescents.

The word "afforestation" means the conversion of land into a forest; but the term "forest" does not necessarily imply the presence of trees. The old Norman kings cleared inhabitants off tracts of land to make hunting grounds and game preserves, and these places thus converted into a wilderness were called forests. And so in our Scottish Highlands, tracts of heath and mountainous land are set apart for deer and are called deer forests, and these may be treeless. The word forest is from the Latin *Foris*, meaning "out of doors." But afforestation has come to mean the planting of trees, the conversion of tracts of waste land into woods or "forests."

In an existing forest the work of the forester may consist in thinning the trees, cutting the "ripe" timber for sale, and in providing for a new crop by tending the undergrowth, by sowing, or by planting. He has also to look after the fencing and drainage, and to keep down ground game, which would prove injurious to the young trees.

But it is afforestation—the planting of waste lands with young trees—which interests us as a possible field of labour for our convalescent tuberculous patients. (But there will be also draining of the land to do as well as tree planting.) There are two methods of putting young trees into the ground—"notch-planting" and "pit-planting."



In "notch-planting" a T-shaped incision is made with the spade, the plant placed in position, and the flaps firmly settled down about the root of the young tree.

In "pit-planting" holes are dug for the reception of the root of the young tree. Naturally the hardness of the work will vary with the character of the soil.

Afforestation will generally take place on moors, on hill-sides, or open stretches of waste land, which should as a rule prove healthy environment for the labourers.

A very important point in connection with the employment of tuberculous subjects in afforestation work will be the provision of adequate and healthy accommodation, and also the provision of wholesome well-cooked food, and the time to take it with comfort. Hurried and irregular meals of badly-cooked food mean dyspepsia, and dyspepsia is often the starting point of tuberculosis. Good nourishment is about as important as fresh air in the treatment of tuberculosis.

Nursery work naturally falls under the heading of afforestation. Nurseries are usually in pretty healthy situations, and the occupation seems at first sight a suitable one. But on making enquiries at a neighbouring nursery I am informed that the work is hard, chiefly spade work. The removal of trees is a job sometimes involving severe exertion.

As to remuneration, the planting of young trees is paid in accordance with the number planted. I was told that a novice might earn 15s. or 17s. a week. A skilled, experienced hand might earn as much as £3 a week. It is evident that the novice would not grow fat on his earnings.

Afforestation, with due regard to the selection of the men and due provision for their comfort, seems to offer a hopeful field for tuberculous subjects.

From this review it would appear that farming, gardening, and afforestation offer, with certain restrictions and limitations, fairly good fields of work for the class we are interested in. But we must recognise that the work of such persons would in many, if not in most, cases be more or less inefficient from want of strength and skill, especially at the beginning. Allowance would require to be made for them till they got accustomed to their employment. If the work were conducted on "strict

business principles" I am afraid this indulgence would be impracticable. But if the farms, gardens, or afforestation schemes were under the control of the State or under Municipal control, the difficulty might be overcome. It would be recognised that those people were trying to recover their health, and that they were "under treatment" just as sanatorium patients are. It would not be a question of making the work pay so much as offering a field for the recovery of health.

There can be no doubt about the wisdom of giving tuberculous persons employment in the open air. It gives them the best chance of recovering their health, and is often attended with gratifying results. But at the same time I think it well that we should not pitch our expectations too high as regards the results of out-door labour. We cannot expect all the cases to do equally well. I believe many would completely recover their health; in others the disease would be "got under," but not quite extinguished; and in others the final outcome would prove unsatisfactory. In the last group would be found the confirmed alcoholics. I do not hold extreme views regarding the use of alcohol, but I recognise the fact that the intemperate consumptive gives himself no chance of recovery. And we cannot close our eyes to the influence of heredity in tuberculosis. In some families, take what measures we may, the children drop off as they reach adolescence, and we know that tuberculosis is to be found in rural districts and among field workers. Country life does not necessarily confer immunity from consumption. But, all the same, experience shows that out-door work in the fresh air affords the best means of recovery from the disease, and it is a matter of national interest that those who are afflicted with it should have this opportunity extended to them.

Let us glance at some other forms of out-door occupation which might be considered suitable for our tuberculous cases.

The *County Constabulary* at first sight seems a promising field. The men are, no doubt, exposed to all sorts of weather, but they are well clad. They have long distances to travel, but they are provided with cycles.

In summer time when one meets a member of the force skimming along a country road looking smart and healthy, one



is apt to regard his "work" as of a very light and pleasant nature, and to form a false estimate of the situation. The county constable has to face all weathers by night or by day, and he may be called upon at a moment's notice to tackle single-handed an able-bodied criminal of equal or greater strength. He may be employed in night hunts for lost persons or escaped prisoners through wet woods and miry fields. The discharge of such duties, and they are not supposititious, demands good physique and sound health.

On making enquiries at the police headquarters in Lanark I learn that persons over 25 years of age are not eligible for admission to the force. At the same time I find that a man who has recovered from phthisis might be taken on provided the examining medical officer passes him as fit.

We can see that the age limit would exclude a large number of ex-sanatorium patients, and the medical examination would doubtless exclude others on the ground of physical unfitness. A good chest measurement and fair physique would be required. And in the case of a man who was likely to break down or have a relapse the pension question would come in to be considered. It seems pretty clear that the county constabulary offers only a limited chance for tuberculous convalescents.

*Motor driving* looks a fairly suitable occupation. One or two ex-patients have acted as chauffeurs with fairly good results. It is not an ideal job, however; exposure to high winds, dust, and petrol fumes constitute objections. Still in some cases I think a man might do well as a chauffeur, especially if he were in family service in the country, and with a kindly and considerate master or mistress.

The possibility of a pulmonary hæmorrhage occurring suddenly at a critical moment on the road cannot be overlooked, and I think that a man who has had severe attacks of hæmoptysis should not undertake such a responsible calling.

*Tramcar conducting*.—For patients who have made a good recovery, and are free from cough and spit, car conducting on a country route might be tried with a good prospect of success.

The office of *country postman* might also offer a fair chance of success in similar cases.

For men accustomed to work with horses *van driving* is

worthy of a trial. It is a form of occupation which I have recommended to such patients on leaving the sanatorium.

*Hawking.*—For a certain class of patients, going round the country with a pony or donkey cart selling earthenware, &c., might afford a congenial and healthy mode of life.

Tending *golf courses, tennis courts, or bowling greens* might offer some openings. I understand that under favourable circumstances this might mean £1 per week and a free house without coals or light. In the case of the golf course keeper some money might be made by making or mending golf clubs, &c.

*Game-keeping.*—The position of assistant game-keeper might prove suitable in some cases. Or that of gillie in charge of the dogs.

On an estate where salmon fishings, grouse shootings, or deer forests existed a place might be found for a handy man who had made a good recovery, and was capable of pulling a boat or tramping the moors without distressing himself.

No doubt there are other occupations which might prove suitable for tuberculous subjects, but the foregoing are those which occur to me at the time of writing. I think it would be a good plan if those who are interested in the subject would note down from time to time likely openings for our patients. By and by we might have quite a big list from which to make a selection.

The whole subject of after-care for consumptive patients is beset with difficulties, especially in the case of the married man or woman with a family. But it behoves us to interest and exert ourselves in finding openings for them, because on this largely depends the continuance of the good they have derived from sanatorium treatment, and the ability to earn a living confers psychical as well as physical benefits.

---



## SOME OBSERVATIONS ON ADVANCED PULMONARY TUBERCULOSIS.

By W. T. G. DAVIDSON, M.B., CH.B. GLASC., D.P.H. CAMB.,  
Senior Assistant Physician, City of Glasgow Fever and Phthisis Hospitals,  
Ruchill.

## I. GENERAL.

THE following observations deal with certain cases treated in Ruchill Phthisis Hospital during the last two years. The cases are mainly those which come under Class II and Class III in the Turban-Gerhardt classification, and, for the purposes of this memoir, can be divided roughly into two groups.

*Group 1.*—Where the disease is more or less advanced and the patient, though not confined to bed, is not fit for any work at all or work only of a light nature.

*Group 2.*—Where the disease is so far advanced as to cause the patient to be bedridden.

For such cases Ruchill Hospital is excellently suited. Situated on high ground facing the south and built on modern sanatorium principles, it has accommodation for 272 patients. It is a short distance inside the northern city boundary, and so is comparatively easy of access for relatives and friends. It is now used for the reception of such "late" cases, though an occasional "early" case is admitted, but is speedily transferred to the Ochil Hills Sanatorium or Bellefield Sanatorium, &c., where all early cases are treated.

The cases included in these two groups are not hopeful as regards successful treatment, either of a permanent or even temporary nature.

In Group 1 the great majority improve in their general health. They eat and sleep well, their cough is not so troublesome, their sputum considerably diminished in quantity, and, on the whole, they feel they have benefited by their stay. The chest condition remains the same or shows some slight improvement. After three months or so they go home, back to their

old environment, and usually gradually get worse again. Others in this group become gradually worse from the beginning, showing no tendency to improvement at all; and lastly, there is a small minority in whom the disease is stationary or has become arrested.

In Group 2 successful treatment, whether permanent or temporary, is practically hopeless. Many of them, no doubt, recover sufficiently to live for months or even years, but it is a hand to mouth existence, and ends sooner or later in death.

Included in this group are those cases who are admitted in a dying condition, *i.e.*, likely to die within two or three months. They are admitted to hospital not so much with a view to treatment as, firstly, for isolation purposes, in order to prevent the spread of the disease by removing such a source of infection from a house probably poor, overcrowded, and badly ventilated, thus giving their relatives a better chance; and secondly, making their own last days as comfortable as possible.

The care and treatment of these advanced cases is a vastly different question compared to that of the "early" case. The majority of these patients are not going to be cured, many of them no doubt may be sufficiently improved in health to face the world again (for a short time), but the majority are going to die, and most of them realise it.

One would have thought that these advanced cases would become fewer the longer the regulations had been in force. The experience here, however, is that cases of pulmonary tuberculosis are being admitted now in the same stage of advancement as they were at the commencement of notification, and from the histories of some of them it is evident that many of them have been suffering from the disease for a considerable time before it was notified. The conclusion is drawn, therefore, that notification is not so successful as it ought to be, since a great many cases are either not recognised by or have not come under the observation of a medical man until the disease is so far advanced as to make the prospect of any beneficial treatment very remote, and in many cases hopeless.

From a public health point of view the present administration in regard to such cases has serious drawbacks. Many of the cases admitted go home again for some reason or other before



they have given the treatment a sufficient trial, certainly before they have learned the anti-tuberculosis lesson. Complaints about the hospital, the beds, the food, the lack of privacy, too much air, homesickness, &c., are offered as excuses. Others have to go home to look after neglected children and erring husbands or wives. Even when about to die some patients want to go home (it is only natural), and though highly infectious and requiring a great deal of attention, they do go home and cannot be prevented. In these cases, and they are not a few, hospital treatment is of no use whatever and just a waste of time and money.

The keynote in the control of these cases is that sufficient power does not seem to be at hand compulsorily to segregate highly infectious persons, or to compel sufferers from pulmonary tuberculosis, and especially the migratory tuberculous, to enter a sanatorium or hospital if it is thought desirable in the interests of the public health. People who will not go to, or who will not stay in, hospital are those very often who have most need to. They prefer to exist in their single or two apartment house, which is often unwholesome and badly ventilated, surrounded generally by a large family, infecting everybody and everything they come in contact with, and propagating the disease, first by producing children, who become infected at an early age, and secondly, by directly infecting contacts. With more power to deal with advanced cases of phthisis much could be done in the way of prophylaxis and eradication of the disease.

The problem, however (and it will probably be a much greater one after the war), is not a simple one; it involves automatically other equally great problems, viz., housing and the care of the children.

Bad housing accommodation, with all its attendant evils, is responsible in a great many cases for the spread of the disease.

Provision, in the shape of sanatoria and open-air schools, will have to be made for children of tuberculous parents so that they may have a better start in life. There the child will learn what is meant by personal hygiene, and on its return home will be in a much better condition, physically and mentally, to withstand tuberculosis.

## II. NURSING.

The problem of nursing cases of advanced phthisis is not an easy one. In cases where no hope of recovery is expected it is nursing alone that will brighten the existence of these patients and make life seem more endurable. When a person is a chronic invalid he has not usually the best of tempers, and a nurse requires exemplary patience and never-failing good spirits to minister day after day to the wants of these patients, who are very often most unreasonable. Special training is not required, but simply a woman with a personality, one who can cheer up and encourage others even when their days are numbered. She must keep them from brooding over themselves or their future, and, if necessary, keep the truth from them. Not many people can do that—they have neither the patience nor the perseverance, and things are allowed to slide; the patient begins to brood over himself, becomes unreasonable and discontented, and then wants to go home. Nurses who have these qualifications of cheeriness and patience make good nurses for such cases of phthisis, and are liked and respected by their patients. A nurse cannot stand the strain long, however, and it has been found that a period of six months is quite long enough.

Each nurse undergoes as a part of her training here six months' duty in a phthisis ward, and for the rest of her time is dealing solely with fevers.

Some remarks made by the nurses themselves are interesting. As a general rule, they do not like nursing phthisis cases, because, no matter what they do, they seldom see a patient getting quite well, and only too often they see patients gradually going downhill from day to day; and instead of being grateful for so much done for them, these patients are often the reverse. This is so different to their experience in the fever hospital. There they see patients admitted seriously ill, and the majority of cases recover and go out quite well. They feel that their work is thereby amply recompensed, but in the phthisis ward they have even more work to do, and they get no satisfaction from that work. An advantage the majority of the nurses claim is that the open-air life is beneficial to



themselves. They put on weight and are practically free from "colds," and so far no nurse in this hospital has contracted the disease.

### III. FRESH AIR.

Fresh air and sunlight are two of the most potent factors in combating tuberculosis. Fresh air, however, does not mean draughts of air, no matter how fresh it is, and my experience has been that most of the patients prefer to be entirely in the open air on the balcony, which is covered by a verandah, rather than in the rooms where the air is fresh enough but where draughts are common, at least in our climate. They remain out in the open, winter and summer, unless it is very stormy, with much wind and rain; otherwise, they brave the elements and seem quite comfortable. Extra clothing is worn, and an oilskin entirely covers the bedding so that nothing is exposed except the patient's head and the pillow. Fresh air is important, but movement of that air is equally important. The close, sultry, humid atmosphere, where the air is warm and stagnant, plays havoc among our phthisis patients, whereas so long as there is movement of the air and no lack of cutaneous excitations they do not complain.

### IV. DIET.

The diet of a phthisis patient has undergone many changes. Over-dieting has given place to an ordinary diet giving the requisite amount of calories. That is the practice in this hospital, and it has been found to be an ample diet.

The important thing is that meals should be given at regular intervals, with nothing between times. The trouble, however, in this hospital is that the cases are very often so far advanced that digestion is interfered with, and it is only with difficulty that many can be made to eat solid food at all.

Many of them refuse the food on the plea that the food is not good or not properly cooked, &c., whereas, as a matter of fact, there has been nothing wrong with the food at all, the explanation being that their digestions are not so good as they had been in health.

## V. TUBERCULIN.

Much has been said for and against tuberculin. My own experience has been that it has done good even in cases of fairly advanced phthisis, though the number of cases treated has not been sufficient to make the evidence conclusive.

I cannot say I cured any patient of the disease with it; but I have treated about fifty cases, specially selected certainly, but all with advanced lesions and mostly in Class II. These cases put on weight; their general health improved; immunity was brought about from toxæmic symptoms; cough became very slight and the sputum scanty, and in some cases both entirely disappeared. The lesion in the lungs was not so marked, in several cases the local signs had practically disappeared, and they were dismissed very much improved. Of course, it may not have been tuberculin at all that accomplished this; at the same time I think it played a large part.

There is a great deal in the administration of the tuberculin. B.E. was found to give the most satisfactory results. The initial dose was 0.3 c.c. of a dilution of 1 in a million, and a dose was administered bi-weekly unless there was some contra-indication, each subsequent dose being increased by 0.3 c.c. Whenever the dose exceeded 1 c.c. a dilution of the fluid ten times less (1 in 100,000) was used. For example, the first four doses would be 0.3 c.c., 0.6 c.c., 0.9 c.c. of a dilution of 1 in a million, the next dose, instead of being 1.2 c.c. of the same dilution, would be 0.2 c.c. of a dilution of 1 in 100,000, and so on, until the undiluted tuberculin was given, when the increase of dose each time was 0.1 c.c. The treatment lasted for about three months, and came to a conclusion after 1 c.c. of pure tuberculin was given. But it is evident that the treatment should be kept up for a longer period, since many cases which had improved under its influence, and had kept well for some time afterward, tended to get worse again when away from the influence of the tuberculin.



## CONCLUSIONS.

The conclusions I have come to are—

That the combination of proper nursing, suitable atmospheric conditions, regular diet, and, in certain cases, special treatment, such as tuberculin and vaccine therapy, may make all the difference to a patient whose condition is incapable of arrest or any great improvement, but who may be made more comfortable, and who will be grateful for his freedom from distressing and annoying symptoms.

That improvement, if brought about, is, in the majority of cases, only temporary, and ends when the patient goes home or shortly afterwards, and is followed by successive periods of stay in hospital.

That with other cases no treatment is of much good, but that, from the point of view of their dependents and relatives, the hospital fulfils a needed purpose.

That the drawback to the whole scheme is that it is a voluntary one, and as long as it is so will not advance us any further towards the end in view, viz., eradication of the disease.

That besides the need for more control over these advanced cases, something has got to be done for the children and for the housing conditions, otherwise tuberculosis will always be with us, and in the same degree as it is to-day.

That, if eradication is the aim, the problem will have to be dealt with lock, stock, and barrel. This means, in other words, compulsory segregation of infected persons, removal of contacts to more hygienic surroundings, and better housing conditions.

---

## LIVER ABSCESS AMONGST OUR SOLDIERS.

By A. G. FAULDS, M.B.,  
Assistant Surgeon, Glasgow Royal Infirmary.

A SEMI-COMATOSE soldier, with a dilated pupil, his right chest solid, and his abdomen swollen and tense, is not an enviable case to be asked to pass your opinion on at your introduction as consulting and operating surgeon to a large military hospital. Still that was my introduction, and had I not had some experience of tropical abscess before this I do not know that I should have been so positive in my diagnosis. In this case I was asked by the doctor in charge of the ward to see this soldier, who was only one of many who had been abroad and had suffered from amœbic dysentery during this campaign. To be brief, I opened first a cerebral abscess in his right occipital region, a week after resected some right ribs for empyema and probable pulmonary rupture, and a few days later opened the abdomen and drained a liver abscess. The man is still convalescent.

When a surgeon is called on to do military duty at an important base, he very soon sees that he has to depend more on his common sense and manual dexterity than on the rules and maxims of his craft. Not only so, but his medical knowledge, if good, will stand him in excellent stead. The men fortunate enough to be in charge of surgical wards in a large hospital who have been favoured at one time by the experience of a residency of one of the great Glasgow hospitals must have had brought home to them the great advantages of their earlier training. I have seen this more than once. I have seen a humble lieutenant of the R.A.M.C. take precedence of men of higher rank because of his practical knowledge of diseases and accidents met with in this great metropolis of industry. Into these large military hospitals in the south soldiers are brought in daily, either from the front or from camps, with every form of casualties and disease, so that it will be easily seen that the medicals who have the best training, and particularly those



educated in such a centre as Glasgow, have no difficulty in establishing themselves before their less fortunate brethren.

The object of this little paper is to illustrate what I have said, and to interest the reader in tropical abscess, a condition which, although seldom seen in Glasgow in comparison with other diseases, was easily diagnosed, and treated successfully, simply from experience gained by the general work in the Glasgow hospitals; and also to discuss the treatment by remedies which I am convinced will in time become of the greatest importance in the hands of competent medical men.

My first acquaintance with tropical abscess happened one day in one of the military hospitals, where I was asked as consulting and operating surgeon to see a soldier who had been in Gallipoli, and had suffered from amœbic dysentery. He had a distended abdomen, a very irregular and high temperature, fluctuating between 101° and 105° F., and all the constitutional disturbances of such a condition. The dysentery had stopped, or had been arrested by the physician, but the condition of the patient had not improved, and his strength was slowly ebbing to a critical condition. On examination of the abdomen it struck me, to be brief, that it was a case for exploration, for, although the liver area was greatly enlarged, the dulness was by no means easy to define, and my diagnosis was that of a hepatic abscess or a perforation of the bowel. The patient was taken to the theatre the following morning, and on opening the abdomen in the middle line above the umbilicus I found a very large liver. My first great surprise was the remarkable appearance of the hepatic surface. It was bright and glistening, of a remarkable steel-grey colour, and pitted on pressure, and by pressing two fingers a little apart on the liver surface one could produce an oozing of œdematous fluid tinged with bile. On further inspection I found a round bulging swelling of about the size of a halfpenny on the surface of the right lobe, which I incised after protection of the peritoneal cavity with gauze packed round the wound, evacuating about an ounce of muco-bilious pus. I then explored the right body of the gland, and, to my surprise, found a large abscess containing about a teacupful of the same foul-smelling pus. Each cavity was wiped out with gauze, a small opening was made in the abdominal wall over each abscess cavity, and a rubber tube

inserted and fixed for drainage. The median incision was closed. The patient was kept lying on his abdomen with the foot of the bed elevated, and the dressing was changed every four hours. - This case made a good recovery.

Shortly afterwards I was asked to see another case of dysentery which had developed an empyema. During the consultation I suggested the possibility of its being originally a case of liver abscess invading the pleural cavity of the right side through the diaphragm. I resected three of the ribs, evacuated 37 oz. of a pale greenish fluid with large masses of fibrinous membrane, the colour and smell of the evacuated matters clearly establishing the original source of the infection, and found the cloaca in the diaphragm. The lung was collapsed. I opened the abdomen through the body of the right rectus, and cleaned and drained the liver abscess as described in the former case. The results in this case were also good.

Among all the cases of amœbic dysentery from the East and the South that I have seen (probably about 50), I opened in all twenty-one abdomens and found sixteen with liver abscess. Two had perforation of the bowel, but in the remainder nothing abnormal could be found. In all these cases none of the other abdominal organs seemed to me to be affected.

The question I wish here to discuss is the mode of infection. All the cases occurred in soldiers who had been abroad, and almost all of whom had had malaria. Not one had abdominal trouble until he had suffered from dysentery for some months. None of the victims of tropical abscess had been alcoholic. Some had been life-long abstainers. All were under the age of 40. The pus found in some of the abscesses was said to be sterile of pyogenic organisms, but all contained amœbæ, which were found not only in the stools, but in the contents and the walls of the abscess. Seeing that all these abscesses occurred in situations that were not in immediate contact with the colon, I cannot see how the bowel could be the immediate infecting area. A considerable amount of discussion has been created, and will continue to exist, upon the question of what part these amœbæ play in the formation of liver abscess, until some fortunate person discovers them in the blood. I am not aware that they have ever been found there, but I am of opinion that no liver, lung, or brain lesion takes place in amœbic dysentery



until they invade that medium. I believe thoroughly these infections are hæmic, the blood being infected from the alimentary canal.

I was extremely indebted to my most excellent friend and bacteriologist, Dr. A. C. Coles, who never tired in his investigations, was always willing to discuss any new view relating to liver abscess, and was keenly interested in the surgery thereof. To him I am indebted for the following report on one of the cases:—

“In the fæces, which were solid, numerous typical cysts of the *entamoeba histolytica* were found, with their one, two, or four nuclei. In the pus from wall of liver abscess a few degenerative forms of the same organism were detected in their vegetative stage. The examination of the blood showed a marked leucocytosis with iodophile reaction of many of the white cells. Leucocytosis is suggestive of, but not constantly found in, cases of liver abscess.”

In discussing the treatment, I would like to say just a very little. Apart from their operative requirements, which the surgeon is called on to meet, I think the real lines of attack in those cases of tropical abscess are from the preceding dysentery or malaria. The plan of treatment ought to be through the blood channels. I have had good results by intravenous injections of kharsivan, quinine, and other medicated salines, although my friend Coles doubts their permanency. Yet I am sure it will only be by this method that all the glands, the lymphatics, the general vascular system, and the alimentary canal can be reached. I know from the medical journals that this mode of treatment is already making strides in more able hands than mine, and I am sure there are great possibilities in the future for the physician who is competent to undertake its details.

---

## Obituary.

---

### ON SERVICE.

CAPTAIN ALFRED THOMAS LOGAN, M.B., CH.B. GLASG.,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce that Captain A. T. Logan, R.A.M.C. (Special Reserve of Officers), who had been previously reported missing on 18th September, is now reported killed on that date. Captain Logan, who was 28 years old, was the second son of Mr. and Mrs. Thomas Logan, Regent Park Terrace, Strathbungo, and began the study of medicine at Glasgow University in 1910, gaining the Dr. Gibson bursary of £144. He took the degrees of M.B., Ch.B., with distinction in surgery, in April, 1915, and received his commission a week later. In July, 1915, he was attached to the Grenadier Guards, and was engaged with his regiment in all the heavy fighting in which they took part from Loos to the Somme. He was mentioned in Sir Douglas Haig's despatches. Captain Logan was related through his maternal grandmother to the old Aberdeenshire family of Dallachy, who held the estates of Dallachy in their possession for upwards of three hundred years.

---

CAPTAIN GEORGE MOWAT, M.B., C.M. GLASG.,  
SOUTH AFRICAN OVERSEAS CONTINGENT.

WE regret to announce that Captain George Mowat, South African Infantry, was killed in action on 12th October. The youngest son of Mr. Robert Mowat, J.P., Cambuslang, Captain Mowat was educated at Garnethill School, Glasgow, and afterwards went for the study of medicine to Glasgow University, where he took the degrees of M.B., C.M., with commendation, in 1895. On the outbreak of the Boer War he was accepted



for medical service, and was twice mentioned in despatches. At the end of the war he returned to Cambuslang, but later settled in Johannesburg as a medical practitioner. When the present war began he volunteered for combatant service, and took part in the campaign in German South-West Africa, being afterwards gazetted Captain, and coming with the South African Overseas Contingent to France. Captain Mowat was 43 years of age, and unmarried.

---

CAPTAIN CHARLES MILL NICOL, M.B., CH.B. GLASG.,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce that Captain C. M. Nicol, second son of the late Mr. J. S. Nicol, of Greenock, died of wounds on 23rd October. Captain Nicol, who was 28 years of age, studied medicine at Glasgow University, where he took the degrees of M.B., Ch.B., with distinction, in 1909. Shortly afterwards he received his commission in the regular army as Lieutenant in the Royal Army Medical Corps, and in 1912 was promoted Captain. When the war broke out he was stationed in Egypt, and in December, 1914, went to France. There he was first engaged at a casualty clearing station, and later he was transferred to a field ambulance and held a staff appointment as Deputy Assistant Director of Medical Services. Captain Nicol was mentioned in one of Lord French's despatches. His youngest brother, Lieutenant Alexander Nicol, Argyll and Sutherland Highlanders, was killed at Achi Baba; and another brother, Lieutenant J. E. Nicol, is in the navy.

---

LIEUTENANT JOHN RITCHIE BROWN, M.B., C.M. GLASG.,  
ROYAL ARMY MEDICAL CORPS.

WE regret to announce that Lieutenant J. Ritchie Brown, second son of the late Dr. J. Ritchie Brown, Saltcoats, was killed on service on 7th November. Lieutenant Brown, who was born in Saltcoats in 1873, was educated at Ardrossan Academy and

Stanley House, Bridge of Allan, studied medicine at Glasgow University, and took its degrees of M.B., C.M. in 1897. He then became house surgeon at Teignmouth Hospital, and he was for a time assistant to Dr. Dunlop, Dalmellington. During the Boer War he acted as a civil surgeon to the Field Force, and subsequently settled in Rhodesia under the British South Africa Company. Returning to this country he joined the Royal Army Medical Corps, and he had been seven months at the front. At the time of his death he was attached to the Royal Garrison Artillery. His Colonel writes of him in reference to his loss:—"He was a most lovable character. He was a gallant man, always ready to help and most fearless in carrying out his duties." Lieutenant Brown was a brother of Mr. W. Mackenzie Brown, M.B.Glasg., of Dalry. He leaves a widow, who lives in London.

---

---

JOHN NEILL MACARTHUR, M.B., C.M. GLASG.,  
PAISLEY.

WE regret to announce the death of Mr. J. N. Macarthur, which took place at his house in Paisley on 22nd October, after a brief illness. Mr. Macarthur, who studied medicine at the University of Glasgow, took the degrees of M.B., C.M. there in 1888, and afterwards became assistant to Dr. M'Millan, of Tarbert, Lochfyne. Soon after his removal to Paisley, where he was engaged in practice for over twenty years, he was appointed physician to Paisley Infirmary Dispensary, but he resigned the appointment on account of the claims of an increasing practice. Singularly modest and unassuming in his bearing, he was a man of very real capacity and of genuine worth, and he rapidly earned, and easily retained, the confidence of a large circle of patients, by whom and by his colleagues his loss will be widely regretted.



WILLIAM ALEXANDER STUART, M.B., CH.B. GLASG.  
GLASGOW.

WE regret to announce the death of Mr. W. A. Stuart, which took place at his father's house in Glasgow on 30th October. The eldest son of Mr. R. W. Stuart, L.R.C.P. & S.E., he studied medicine at the University of Glasgow, where he took the degrees of M.B., Ch.B. in 1905. After graduation he became successively resident physician and surgeon to the throat and nose department, senior resident physician, and extra dispensary physician to Glasgow Royal Infirmary; and he had created for himself a considerable practice which continued to increase until its development was interfered with by ill-health. Mr. Stuart showed as a student qualities which marked him also as a practitioner; he was a man of sterling character, and an able clinician, with a thoroughly scientific outlook upon his profession, and his early death has cut short a career of much promise.

---

MRS. ELLA SMITH HILL SHEARER, M.B., CH.B. GLASG.,  
JORDANHILL.

WE regret to announce the death of Mrs. E. S. H. Shearer, which took place on 9th November at her home in Jordanhill. The youngest daughter of the late Mr. D. E. Hill, of Ayr, Miss Hill was a student of Queen Margaret College, whence after graduating in arts she took the degrees of M.B., Ch.B. Glasg. in 1907. She subsequently filled the post of house physician and house surgeon at the Elder Cottage Hospital, Govan, and she was afterwards appointed medical inspector of schools for the county borough of Stoke-on-Trent, an appointment which she resigned a few years ago, when she retired from practice on the occasion of her marriage.

---

JAMES JAMIESON, M.D. GLASG.,  
MELBOURNE.

WE regret to announce the death of Professor James Jamieson, of Melbourne, at the age of 76 years. A native of Beith, he studied medicine at Glasgow University, taking the degree of M.D. in 1862, and that of C.M. in the following year. Going a few years later to Australia he practised for ten years in Warrnambool, and in 1877 he settled in Melbourne, taking the degree of M.D.Melb., in 1878. In the following year he was appointed lecturer on obstetrics and diseases of women and children, and in 1887 professor of medicine in Melbourne University. He also held the posts of physician to the Alfred Hospital, Melbourne, and medical officer of health for the city. In 1907 he retired from the chair, and five years later from practice. Dr. Jamieson was for many years editor of the *Australian Medical Journal*, which he did much to bring to its present position among scientific periodicals. In his hands the hygienic condition of Melbourne underwent a remarkable improvement. He was president of the Victoria Medical Society, and of the section of medicine in the Australian Medical Congress of 1902. At his retirement from his chair his past and present students founded an endowed scholarship in medicine as a memorial of his distinguished occupancy.

---



## CURRENT TOPICS.

---

UNIVERSITY OF GLASGOW: GRADUATION IN MEDICINE.—At the graduation ceremony, held in the Bute Hall on 11th November, there were four recipients of the M.D. degree. The capping was performed by Principal Sir Donald MacAlister, and Professor Gibson introduced the graduates in medicine, of whom the following is a list:—

### DOCTORS OF MEDICINE (M.D.)

#### I. WITH HONOURS.

Thomas Walmsley, M.B., Ch.B.

#### II. WITH COMMENDATION.

John Bowes M'Dougall, M.B., Ch.B.

#### III. ORDINARY DEGREE.

Campbell Kay Stevenson, M.B., Ch.B.  
Henry Yellowlees, M.B., Ch.B.

UNIVERSITY OF GLASGOW: MATRICULATION FOR SESSION 1916-17.—At the close of matriculation for the winter session at the end of October the following were the numbers of matriculated students at the University:—Men: theology 20, law 23, science 124, arts 141, medicine 447. The medical students are divided as follows between the different years:—First year 145, second 83, third 45, fourth 54, fifth and later 120. The total number of male students is 755, exactly 300 less than in session 1915-16. On the other hand, there are 705 women students, as against 637 in 1915-16, and 625 in 1914-15. The increase is principally apparent in medicine, in which subject there are 265 women students, of whom 102 are in the first year. Since the beginning of the war the increase in the number of women medical students has been steadily progressive, as is shown by the following figures:—1913-14, 92; 1914-15, 127; 1915-16, 187; 1916-17, 265.

THE TRIPLE QUALIFICATION.—At the examinations of the Board of the Royal College of Physicians of Edinburgh, Royal College of Surgeons of Edinburgh, and Royal Faculty of Physicians and Surgeons of Glasgow, concluded at Edinburgh on 20th November, the following candidates, having passed the final examination, were admitted L.R.C.P.E., L.R.C.S.E., L.R.F.P. and S.G.:—Reginald John Thomas Malcolm-Casper, Spearman Charles Swinburne, William John Mitchell White, Edgar Annequin, Stanley Wall Hoyland, Martha Hunter Hoahing, Charles George Booker, Herbert Ainslie Grant Dykes, Janie Isabel M'Birnie, Edward Mervyn Lewis Morgan, Paul Lucien Manuel, Harry Morley, Reginald Vincent Clarke, Robert M'Gregor, Owen Glendower Evans, Edwin Butler, and Robert Woodside. *Medicine*—Yeshwant Narayan Kadam, Edward Glyn Jones, William Fidler Mason, and John Joseph Mulvey. *Midwifery*—Yeshwant Narayan Kadam, William Fidler Mason, Russell Nelham Burton, and Wendell Thomas Garretson. *Medical Jurisprudence*—Cecil Vale Samwell, Indranarayan Borrah, William Ulic Desmond Longford, George Nicol Groves, Thomas Robert Wilson, Henry Shaw, Don Adrian Jayasinghe, Robert M'Laren, Patrick Aloysius O'Brien, and Wendell Thomas Garretson.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At a meeting of the College, held on 19th October, the following gentlemen, having passed the requisite examinations, were admitted Fellows:—M. L. G. Hallwright, M.D.Durh., Captain, New Zealand Medical Corps, Totland, Isle of Wight; M. Horan, M.B., B.Ch.Dub., London; W. C. M'Caw, M.B., Ch.B.New Zealand, Captain, New Zealand Medical Corps; J. M'Houl, M.B., Ch.B. Glasg., Captain, R.A.M.C.(T.), London; J. D. Milne, M.B.Toronto, Canada; H. Nicol, M.R.C.S.Eng., L.R.C.P.Lond., London, S.W.; A. C. Oldham, L.R.C.S.E.(Triple), Major, R.A.M.C.(T.), Kidderminster; G. L. Preston, M.R.C.S.Eng., L.R.C.P.Lond., Saltash.

At the recent dental examinations the following candidates passed the final examination, and were granted the diploma L.D.S., R.C.S.Edin.:—E. L. Kelly, United States; J. A. Stegmann, South Africa; J. M'L. Foreman, Kirkcaldy; R. G. du Toit, South Africa; J. R. Watson, Edinburgh; and J. H. Brown, Edinburgh. G. Laing passed in the subjects of medicine and surgery.



ROYAL FACULTY OF PHYSICIANS AND SURGEONS.—The annual meeting of the Royal Faculty of Physicians and Surgeons of Glasgow was held on 6th November in the Faculty Hall, St. Vincent Street. The following elections were made:—

*President*—Dr. Ebenezer Duncan. *Visitor*—Dr. A. Freeland Fergus. *Treasurer*—Dr. W. G. Dun. *Honorary Librarian*—Dr. Alexander Napier. *Representative to General Medical Council*—Mr. David N. Knox.

*Councillors*—The President (*ex officio*), the Visitor (*ex officio*), the Treasurer (*ex officio*), the Honorary Librarian (*ex officio*), Mr. D. N. Knox, Representative to the General Medical Council (*ex officio*); (vacancy owing to election of Dr. A. Freeland Fergus as Visitor), Dr. David Newman, Dr. James A. Adams, Dr. Robert Jardine, Dr. John Barlow, Dr. J. Wallace Anderson.

*Board of Examiners for the Licence*.—Mr. Peter Bennett, Mr. James Muir, D.Sc.; Dr. A. Freeland Fergus—in physics. Mr. J. Robertson Watson, Mr. Thomas Gray, Mr. T. Stewart Barrie—in chemistry. Mr. B. G. Cormack, Dr. John Paterson, Mr. Leonard A. L. King—in elementary biology. Mr. James Battersby, Mr. Alex. M'Phail, Mr. Archibald Young—in anatomy. Mr. Donald Duff, Mr. Wm. Ernest Thomson, Mr. Wm. Snodgrass—in physiology. Dr. Charles Workman, Mr. R. M. Buchanan, Dr. J. H. Teacher—in pathology. Dr. Alex. Napier, Mr. John P. Duncan, Mr. R. Barclay Ness—in materia medica. Dr. G. H. Edington, Mr. Henry Rutherford, Mr. D. N. Knox, Dr. James A. Adams, Dr. John Barlow—in surgery and surgical anatomy. Dr. E. H. L. Oliphant, Dr. G. Balfour Marshall, Dr. Robert Jardine—in midwifery. Dr. David M'Kail, Dr. Carstairs C. Douglas, Dr. John Glaister—in medical jurisprudence.

*Clinical Examiners*.—The physicians and surgeons of the Royal, Western, and Victoria Infirmaries who are Fellows of Faculty.

*Board of Examiners for the Fellowship*.—Dr. T. H. Bryce, Mr. James Battersby, Mr. Arch. Young—in anatomy (comparative and human). Dr. Wm. Ernest Thomson, Mr. Wm. Snodgrass, Dr. A. J. Ballantyne—in physiology. Dr. Charles Workman, Dr. John H. Teacher, Dr. Robert Muir—in pathology. Dr. John Barlow, Dr. James A. Adams, Mr. D. N. Knox—in surgery. Dr. A. Freeland Fergus, Dr. John Rowan—in ophthalmology. Mr. J. Walker Downie, Dr. Thomas Barr—in aural

surgery, &c. Dr. Carstairs C. Douglas, Dr. David M'Kail, Mr. Hugh Galt—in medical jurisprudence. Mr. W. Donald Anderson, Mr. David Fyfe—in dental surgery. Dr. W. R. Jack, Dr. Alex. Napier, Dr. J. W. Anderson—in medicine. (Vacancy), Dr. J. H. Macdonald—in psychological medicine. Dr. A. K. Chalmers, Dr. John Glaister, Dr. John C. M'Vail—in State medicine. Dr. John G. Gray, Dr. George M'Intyre—in dermatology. Mr. R. M. Buchanan (with an examiner in pathology)—in bacteriology. Dr. G. Balfour Marshall, Dr. Samuel Sloan, Dr. Wm. L. Reid—in midwifery and diseases of women.

*Examiners for the Diploma in Public Health.*—Dr. David M'Kail, Dr. John C. M'Vail, Mr. R. M. Buchanan, Dr. Carstairs C. Douglas, Dr. A. K. Chalmers, Dr. John Glaister.

*Dental Board.*—Dr. A. N. M'Gregor, Mr. A. G. Faulds—in surgery. Dr. John Henderson, Mr. John P. Duncan—in medicine and materia medica. Dr. A. J. Ballantyne, Mr. James Battersby—in anatomy and physiology. Mr. J. Mason Noble, Mr. W. D. Anderson—in dental pathology and surgery. Mr. W. W. Dickie, Mr. R. S. Grant—in mechanical dentistry. Mr. J. Forbes Webster, Mr. W. F. Mackenzie—in dental anatomy and physiology. Mr. Hugh Mackay, Mr. W. B. Hepburn—in dental metallurgy. Mr. Peter Bennett, Mr. Thomas Gray, D.Sc.—in chemistry and physics.

*Finance Committee.*—The Treasurer (*ex officio*), the President (*ex officio*), Dr. Charles Workman, Mr. F. V. Adams, Dr. J. H. Teacher, Dr. George M'Intyre, Dr. John P. Duncan.

*Library Committee.*—The Hon. Librarian (*ex officio*), Dr. Charles Workman, Dr. A. J. Ballantyne, Mr. J. H. Pringle, Mr. R. M. Buchanan, Dr. E. H. L. Oliphant, Dr. Leonard Findlay.

*Inspectors of Drugs.*—Dr. Hugh Morton, Dr. Ivy Mackenzie.

*Committee of Management, Macarthur Bursary.*—The President, the Treasurer, Mr. D. N. Knox, Mr. James Battersby, and Dr. John Glaister.

*Managers of Western Infirmary.*—Dr. William G. Dun and Mr. Archibald Sloan.

*Directors of the Maternity Hospital.*—Dr. George Halket, Dr. William L. Reid.

*Governors of the Victoria Infirmary.*—Dr. Ebenezer Duncan, Dr. H. L. G. Leask.

Mr. James A. M'Callum, clerk of Faculty; Mr. Alexander



Duncan, LL.D., B.A., secretary and librarian; Mr. Walter Hurst, F.L.A., acting secretary and librarian; Mr. William Matthews, officer.

APPOINTMENTS.—The following appointments have recently been made:—

J. R. F. Cullen, M.B., C.M.Glasg. (1886), to be Certifying Factory Surgeon for the district of Bonhill.

G. B. M'Kendrick, L.R.C.P. & S.E., L.R.F.P.S.G., to be Certifying Factory Surgeon for the district of Pollokshaws.

John Rowan, M.D., F.R.F.P.S.G., to be Surgeon to the Glasgow Ophthalmic Institution.

J. Wilson, M.D.Glasg. (M.B., 1901), to be Certifying Factory Surgeon for the Irvine district.

*Royal Navy* (30th October): Staff Surgeon C. E. C. Stanford, M.B., C.M.Glasg. (1898), B.Sc., to *Europa*, additional. Temporary Surgeon R. A. Barlow, M.B., Ch.B.Glasg. (1913), B.Sc., to *Vivid*, additional for Plymouth Hospital.

*Royal Army Medical Corps* (16th October): To be temporary Captain—Temporary Lieutenant D. Fisher, M.B., Ch.B.Glasg. (1909).

*24th October*: Major J. D. Richmond, M.B., Ch.B.Glasg. (1900), to be temporary Lieutenant-Colonel while in command of a Field Ambulance. To be temporary Captain—Temporary Lieutenant J. Donald, M.D.Glasg. (M.B., 1898). To be temporary Lieutenants—A. B. Ferguson, M.B., Ch.B.Glasg. (1905); A. J. Hutton, M.B., Ch.B.Glasg. (1907); D. L. Carmichael, M.B., Ch.B.Glasg. (1903); J. Paterson, M.B., Ch.B.Glasg. (1915).

*2nd November*: To be temporary Lieutenants—J. L. Scott, M.B., Ch.B.Glasg. (1911); T. Waterhouse, M.B., Ch.B.Glasg. (1912); D. F. Riddell, M.B., Ch.B.Glasg. (1903); R. W. Nairn, M.B., C.M.Glasg. (1891). R. H. Campbell, M.B., Ch.B.Glasg. (1902), F.R.C.S., to be temporary Honorary Captain whilst employed at the British Red Cross Hospital, Netley.

*4th November*: Temporary Captain D. D. Logan, M.D.Glasg. (M.B., 1900), to be temporary Lieutenant-Colonel.

*11th November*: Temporary Lieutenants to be temporary Captains—A. Neilson, M.B., Ch.B.Glasg. (1912); E. J. Primrose,

M.D.Glasg. (M.B., 1895); R. B. Lothian, M.B., C.M.Glasg. (1888); K. N. MacLean, M.B., Ch.B.Glasg. (1914); A. M. Kennedy, M.D. Glasg. (M.B., 1908); W. A. Higgins, M.B., Ch.B.Glasg. (1915); G. T. Walker, M.B., Ch.B.Glasg. (1915); J. P. M'Greehin, M.B., Ch.B.Glasg. (1915); D. J. MacDougall, M.B., Ch.B.Glasg. (1915); R. K. H. Gillespie, M.B., Ch.B.Glasg. (1915); A. Dick, M.B., Ch.B.Glasg. (1915); H. L. M'Cormick, M.B., Ch.B.Glasg. (1915); N. W. Gilchrist, M.B., Ch.B.Glasg. (1915); K. M'A. Ross, M.B., Ch.B.Glasg. (1915). To be temporary Lieutenants—P. Maguire, M.B., Ch.B.Glasg. (1905); W. H. Kirk, M.B., Ch.B.Glasg. (1906).

WAR HONOURS FOR GLASGOW GRADUATES.—In Lieutenant-General Sir Percy Lake's list of officers and men deserving of special notice in the Mesopotamian campaign, published by the War Office on 19th October, occur the names of several Glasgow graduates.

Captain A. Glen, M.B., R.A.M.C., Special Reserve, is a student and graduate of Glasgow University, where he took the degrees of M.B., Ch.B. in 1913. This is his second mention in despatches.

Lieutenant W. G. Macdonald, M.B., R.A.M.C., took the degrees of M.B., Ch.B. at Glasgow University in 1905. Before the war he was in practice in Penrith.

Brevet-Colonel J. M. Sloan, M.B., D.S.O., R.A.M.C., notice of whose distinctions in the war has already appeared in the *Journal*, is a son of Dr. Samuel Sloan, of Glasgow, and graduated at Glasgow University in 1898.

In the *London Gazette* of 20th October it was announced that His Majesty had been graciously pleased to confer the Military Cross upon temporary Captain N. M. Rankin, M.B., R.A.M.C. Captain Rankin is a graduate of Glasgow University of the year 1908. The award was bestowed upon him "for conspicuous gallantry and devotion to duty in remaining at his post and attending to wounded after the regimental Aid Post had received three direct hits and he himself had been wounded in the face. For four hours he continued at duty, the area around his Aid Post being heavily shelled all the time."

It was intimated on 7th November that the French Army had awarded the Croix de Guerre to Miss A. Louise M'Iloy, M.D.Glasg. (M.B., 1898), D.Sc., for her work as *Médecin en Chef*



in the Scottish Women's Hospital, formerly at Troyes, France, and, later, with the Armée d'Orient in Salonica. This is a distinction awarded for unusual merit and service to the country.

In a supplement to the *London Gazette*, issued on 14th November, it was announced that the Military Cross had been bestowed on the following Glasgow graduates:—

Temporary Captain J. E. Black, M.B., Ch.B.Glasg. (1901), R.A.M.C., Special Reserve, "for conspicuous gallantry and devotion to duty in action. He rendered valuable services when attending the wounded under heavy machine gun and shell fire. Later, he went out into 'No Man's Land' to succour the wounded."

Temporary Captain J. Macintyre, M.B., Ch.B.Glasg. (1906), R.A.M.C., "for conspicuous gallantry and devotion to duty. He tended and dressed the wounded under heavy fire with great courage and determination, himself being four times buried by shells."

Captain Archibald Wilson, M.B., Ch.B.Glasg. (1911), R.A.M.C., Special Reserve, "for conspicuous gallantry and devotion to duty. He organised and led parties of stretcher-bearers under very heavy fire, displaying great courage and determination. He has on many previous occasions done fine work."

The following medical students of the University were also mentioned in Mesopotamian despatches:—

Lieutenant T. C. Christie, prior to the war a medical student and a member of the O.T.C., was among the first of the O.T.C. men to be gazetted on the outbreak of war. He was given a commission in the Argyll and Sutherlands, and, later on, was attached to the Seaforths. He has already been twice wounded.

Second Lieutenant J. R. M'Crindle, a medical student and a prominent member of the O.T.C., was commissioned early in the war to the Gordons. He was transferred at a later date to the Royal Flying Corps.

GLASGOW MEDICAL CASUALTIES.—Further casualties among Glasgow graduates and students of medicine have been reported during the past month.

Lieutenant G. J. M'Gorty, M.B., Ch.B.Glasg., who was severely

wounded on 7th October, is the only son of Mr. G. M'Gorty, wine merchant, Glasgow. He graduated in October, 1915, and after serving for some time at the Red Cross Hospital, Bellahouston, received his commission in the R.A.M.C.

Lieutenant T. M. Crawford, M.B., Ch.B.Glasg. (1914), R.A.M.C., has received gunshot wounds in the back and chest. Mr. Crawford received his school education at Ayr Academy, and his subsequent career at Glasgow University was unusually brilliant.

Lieutenant George Kirkhope, M.B., Ch.B.Glasg. (1916), R.A.M.C., has been wounded in the wrist. He was a pupil of Irvine Royal Academy before he entered the University.

Second Lieutenant S. G. M'Clelland, K.O.S.B., missing since 15th September, 1915, is now presumed by the War Office to have been killed. The fourth son of Mr. A. M'Clelland, of Pollokshields and Buenos Aires, he was educated at Dollar Academy, and was a medical student of Glasgow University when war broke out. He received his commission in December, 1914.

Private J. G. Rennie, Scottish Rifles, killed in action on 23rd October at the age of 23 years, was a medical student and the eldest son of Mr. J. S. Rennie, M.B., C.M.Glasg. (1882), of Coatbridge.

THE LATE PROFESSOR FERGUSON.—The death of Professor John Ferguson on 2nd November removes from the circle of the living almost the last survivor of those among the professors of Glasgow University who had carried its learning and its traditions from the Old College to Gilmorehill. He had been connected with it, as student, as lecturer, and as professor, for over sixty years. As a student his career was exceptionally brilliant, and gave rich promise of the many-sided accomplishments which were afterwards so to distinguish him among men of science. He was conspicuous alike in literature and philosophy, in mathematics and natural science. He succeeded the late Professor Thomas Anderson in the chair of chemistry in 1874, and occupied it for forty-one years. Of his work in that chair others have already spoken in the appreciations which have appeared in the public press, in which the details of his career have been set forth at length. Chemistry in its more learned



interpretation was not a subject of the medical curriculum, the majority of whose first-year students were until recent years concerned merely with the collection of sufficient chemical formulæ to conceal their ignorance of its principles until they had passed the first professional examination. Such students were for many years the greater part of Professor Ferguson's audience. Things have changed of late, since the interaction of organic chemistry and physiology has thrown so great a light upon the processes of the living body; but in those days it was easy for his students to forget, or never to have known, that they were listening to a man of international reputation who, wherever he might go among chemists, was looked upon as one of the first among the historians of their science. What we did not learn from him, because of our own blindness, was much; but we could not go through his class without learning much both from his subject and from the man himself. It was for many of us our first approach to an exact science, and the vestiges of its methods which clung to us after their results had forsaken our conscious recollection made our steps easier among the difficulties which were to follow. From the man himself we learned courtesy and unself-conscious dignity, and those of us who in those early days took a laboratory course learned also the habit of criticism of our own work, and ceased to be satisfied with less than the best that we could do.

Genial and unpretending, Professor Ferguson in private life drew men to himself as much by his essential kindness as by his varied accomplishments. At ease with everybody, he set everybody at his ease, and his learning was forgotten in the shimmer of his wit. To his juniors he was a helpful and sympathetic counsellor, to his contemporaries a constant and a cherished friend. There are many to whom his loss will make the earth a poorer place.

BEQUESTS TO MEDICAL CHARITIES.—By the will of the late Mr. W. P. Lowrie, Eastfield, Bearsden, a sum of £56,000 has been bequeathed to various charitable institutions. Among the bequests are £10,000 to the Glasgow Royal Infirmary, £10,000 to the Western Infirmary, £3,000 to the Victoria Infirmary, and £3,000 to the Royal Hospital for Sick Children.

MATERNITY AND INFANT WELFARE CENTRES IN GLASGOW.—We have received from the Medical Officer of Health for Glasgow a copy of a memorandum dealing with the work of the Infant Welfare Committee of the Corporation, and the steps which it proposes to take for the introduction of a scheme of maternity service and infant welfare. The committee has exchanged views with representatives of the Royal Maternity Hospital and the Royal Hospital for Sick Children, and the Medical Officer has conferred with those of the Nurses' Training Home, Govan, with the result that a scheme for extension of the existing facilities has been drawn up, and is detailed in the memorandum. In the words of the Notification of Births Act, 1915, local authorities may arrange "for attending to the health of the expectant mother and nursing mother, and of children under five years of age." Such arrangements include the provision of dispensaries and pre-natal consultations for expectant mothers, supplemented by a system of home visitation; corresponding facilities for children; and hospital accommodation. Although these requirements may to some extent be met by adjuncts to existing institutions such as those referred to above, Dr. Chalmers considers that the neglect of children in the pre-school age demands a wider remedy, and that a child welfare centre is necessary in each of the industrial districts of Glasgow. Such a centre should include "an ante-natal clinic and an infant consultation, a crèche or day nursery, an ample playground, and a kindergarten, all of them constituting a school both for students and mothers. Diets would be held for the periodic inspection of children during the whole pre-school age." Fresh-air fortnight schemes and country homes for invalid children are essential extensions, and the co-operation of existing organisations for these purposes is invited. While anticipating great benefits from the operation of such a system, Dr. Chalmers is, however, careful to warn against its being looked upon as all that is necessary to produce a healthy race, and to indicate that the best results cannot be hoped for "unless it is associated with reform in the conditions of housing on a scale very much wider than has hitherto been attempted."

The proposed additions to the scheme as already in operation would include—



"1. The opening of ante-natal dispensaries at the Maternity Hospital and the Nurses' Training Home, Govan, and at such of the existing fourteen infant consultations or tuberculosis dispensaries as may be suitable.

"2. The opening of a ward at the Maternity Hospital for the treatment of ante-natal conditions requiring aid.

"3. The holding of special diets for infant consultations at the dispensary of the Sick Children's Hospital in West Graham Street, and at the Maternity Hospital, and of diets for children up to 5 years of age at the Elder Hospital, Govan, and at such of our infant consultations as seem necessary.

"4. The provision of beds for nurslings, with or without their mothers, on the grounds of the Sick Children's Hospital at Yorkhill.

"5. The provision of an open-air crèche."

In a concluding paragraph Dr. Chalmers speaks highly of the work of the Glasgow Infant Health Visitors' Association, but urges its correlation with that of other organisations, and the addition to its committee of representatives from the other associations and institutions mentioned in his memorandum. A series of appendices explains the steps already taken, and gives details of the proposed additions and extensions.

TREATMENT OF VENEREAL DISEASES.—The Local Government Board for Scotland have issued for the immediate consideration of the local authorities copies of an Order containing regulations made by them under Section 78 of the Public Health (Scotland) Act, 1897, with respect to the treatment of venereal diseases. Along with the Order is transmitted a copy of a memorandum prepared by the Board for the information of local authorities and their medical officers of health, indicating the nature of the problem and the particulars of a scheme that should be framed by the local authorities for the diagnosis, treatment, and prevention of these diseases. In a circular to inspectors of poor the Board state that the facilities to be afforded under these schemes to medical practitioners are to apply to outdoor parochial medical officers and medical officers of poor-law institutions. The Board are of course aware that poor-law authorities treat cases of venereal diseases in their institutions, and they propose, in addition to giving grants to local

authorities, to entertain applications for grants in respect of special expenditure incurred by poor-law authorities in carrying out treatment of these diseases in poor-law institutions. Any such authority that proposes to apply for a grant should submit to the Board a statement showing the nature and the extent of the institutional treatment that is at present being given, and of any additional accommodation or other arrangements proposed. Where the arrangements are carried out to the full satisfaction of the Board 75 per cent of the approved net expenditure thus incurred will be repaid by the Board. Secretaries of hospitals are also informed that the Board trust that hospital authorities will be willing to confer with local authorities in their area with a view to arrangements being made for the treatment of appropriate cases. The Board are aware that at the present time difficulties may arise in undertaking this work in the case of some hospitals, owing to the shortage of medical staff, but they are assured by the Army Council that, wherever possible, arrangements will be made whereby those officers of the Royal Army Medical Corps whose services would be of special value for the work will be enabled to give such assistance as their military duties permit.

NATIONAL INSURANCE IN LANARKSHIRE.—At a meeting of the Insurance Committee for the County of Lanark held in the County Buildings, Glasgow, on 8th November, Colonel King Stewart, who presided, said it was very satisfactory that, notwithstanding that the income of the committee had been considerably reduced as a result of enlistments, they anticipated that the income to meet the cost of administration would be sufficient for 1917 without encroaching upon the substantial balance they had in hand. Many committees throughout Scotland from time to time had made representations that their income was insufficient, and they, he believed, had received certain Treasury grants. It had never been necessary for their committee to apply for any grant of that kind, as they had always been able to pay their way. Even although there might be very serious difficulties as a result of the war, they had a substantial balance in their funds which ought to meet any additional loss or expenditure which might be incurred.

Mr. James Murdoch proposed the adoption of the minutes of



the Medical Benefit Committee. He said the committee had received a report from the Medical Service Sub-Committee with regard to certain complaints against doctors. These were not very serious, but it was quite satisfactory that the complaints were investigated, and they had little doubt that the official notice taken of their errors would have a stimulating effect upon the medical profession throughout the county. The committee did not suggest that there was anything more than carelessness with regard to the granting of sickness certificates, and it was very necessary that that should be checked, as carelessness must involve considerable loss to the societies. Considering the very large number of insured persons in the county—numbering well over 80,000—the number of complaints they had received was very small indeed. The Panel Committee, specially appointed by the doctors themselves and consisting entirely of doctors, had investigated complaints made by the chemists with regard to excessive prescribing on the part of certain doctors for 1915. As a result of their investigation they had recommended to the Insurance Committee that in certain cases a penalty should be imposed. It was very satisfactory that that matter had been gone into so thoroughly by the Panel Committee, and even better was it that they should have had no hesitation in suggesting a penalty in cases where they were of opinion that such was desirable. The insured population were entitled to every desirable drug necessary for their proper treatment, but at the same time it was necessary also that all extravagance should be discouraged.

GLASGOW HOSPITAL FOR WOMEN.—The annual meeting of the subscribers to the Glasgow Hospital for Women was held in the Hospital, Elmbank Crescent, on 9th November, under the presidency of the Rev. J. A. C. Murray.

Mr. H. Stuart Girvan, honorary secretary, submitted the annual report, in which it was stated that the outdoor consultations, including indoor treatments without operation, numbered 3,273, an increase of 85 over last year. The number of operations was 151. The total ordinary expenditure amounted to £668, 6s. 7d., and the total ordinary revenue to £611, 7s. 4d., leaving a deficiency of £56, 19s. 3d. The directors expressed their confidence that many of the benevolent public of Glasgow,

who were not at present contributors, would readily support the hospital were they to know what had been done through its agency in the alleviation of suffering. The number of subscriptions from employees in public works still fell short of what might be expected in view of the fact that the patients of the hospital were almost entirely the wives and daughters of working men. A legacy of £2,000 to the hospital had been intimated under the settlement of the late Mrs. James Dixon of Fairleigh, Bothwell. The directors had acquired new hospital premises at Burnbank Terrace with a portion of the legacy; but as the buildings were at present occupied by the Red Cross Society, the directors had allowed the Society to remain as tenants till Martinmas, 1917. The balance of the legacy, it was hoped, would enable the directors to make the alterations and repairs requisite for an up-to-date hospital.

**EAST PARK HOME FOR INFIRM CHILDREN.**—The forty-second annual meeting of this institution was held in the Home on 25th October, Mr. James Graham presiding.

Mr. F. H. Young moved the adoption of the annual report, in which it was stated that for the past year the income exceeded that of the preceding year by nearly £300. In respect, however, of the great increase in the cost of living and the other requirements of the Home, the expenditure for the year had increased by a sum of nearly £400. The legacies received during the year had amounted to only about £500, as against £1,500 in the previous year. In order to square the account a sum of £724, 5s. 8d. had to be taken from the extraordinary income and expenditure account to meet the deficit. Throughout the year 130 children had been constantly in residence at East Park, and 20 at the Biggart Home, Prestwick. Fifty-four children were returned to their parents greatly improved in health, and able to attend an ordinary school or one of the cripple centres provided by the School Board for such children.

Dr. William George Black seconded, and the report was adopted.

**SCOTTISH NURSES' ASSOCIATION.**—The annual meeting of this Association was held on 2nd November, the president, Mrs. Strong, in the chair. The annual report showed that 157 new



members had joined the association during the past year, and it was hoped that that number would be doubled in the year to come. The finances of the Association were also on a sound basis. After the adoption of the report and the appointment of officials, Dr. M'Gregor Robertson moved that the Association should "empower the Executive to arrange federation with other similar nurses' organisations, and to appoint representatives to such other organisations, provided always that the constitution and by-laws of the Association were not thereby impaired." In England the National Union of Trained Nurses, which had branches all over that country, was, he said, very strong, and would become stronger. Nurses must stand together. United the nurses of England, Scotland, and Ireland could get what they wanted; separate they could not expect to attain their ideal of raising the standard of nurses' training and practice.

Mr. J. A. C. Macewen seconded, and Mrs. Strong spoke in support of the resolution, which was carried unanimously.

Dr. M'Gregor Robertson afterwards delivered an address on "The present position of the Nurses' Registration Bill and the attitude of the College of Nursing, Limited." The Nurses' Registration Bill, he said, had been consistently opposed by organisations which did not wish to see the profession properly recognised. The nurses wished a General Nursing Council for the direction of the training and registration of the nurses of the three kingdoms. The duties of that council would include the drawing up of registers of nurses sufficiently trained and experienced to be put on the register; also, the preparation of a list of recognised schools for training. The State, the medical profession, nurses' training schools, and the nurses themselves would all be represented on this council.

After the address, on the motion of Miss Stewart, the following resolution was passed:—"That this annual meeting of the Scottish Nurses' Association, having heard the account of the proceedings of the Central Committee of State Registration for Nurses in the matter of State registration, entirely approve of the decision they have arrived at to proceed with their own Bill before Parliament."

SCOTTISH MARINE BIOLOGICAL ASSOCIATION.—The annual

report of the Scottish Marine Biological Association for 1915 shows that in spite of the difficulties which the war, by limiting the number of research workers, has thrown in its way, this institution has continued to do excellent work. A considerable number of papers, embodying the results of work done during the year, has been published in various scientific journals by Miss M. V. Lebour, Dr. J. F. Gemmill, Mr. J. H. Paul, and Mr. Richard Elmshirst. Recording and observational work has been continued throughout the year. The class in marine zoology for teachers held in the summer vacation, though poorly attended owing to the war, gave satisfactory results in that all the teachers enrolled were found, on inspection by Mr. F. W. Young, to be entitled to certificates under article 55 of the regulations. The Council calls attention to the fact that organised visits of members of learned societies and others to the Marine Station are heartily welcomed, due notice being given to the superintendent. The number of visitors to the museum and aquarium during the year was 3,205. The financial situation was unfortunately hardly so satisfactory, there being a deficit of £108, 15s. 1½d. The income was £381, 3s. 7d., and the expenditure £489, 18s. 8½d. The loss was entirely due to the small amount received in donations, no doubt owing to the war. The bank overdraft amounted to £288, 10s. 4½d.; but in the beginning of the present year a special appeal was made for funds to clear it off, with the gratifying result that a sum of £200, 14s. was subscribed.

RED CROSS SOCIETY: SCOTTISH BRANCH.—Our last notice of the work of the Scottish Branch of the Red Cross Society brought its record down to the end of June. Its work in the second half of the year has continued to extend, and to find generous support in all English-speaking countries. Thus, early in July a sum of £158 was received from New York, being the profit of the fourth annual concert and ball of the Lewis and Skye Associations of New York, and was devoted to the naming of three beds at Bellahouston. A further sum of £410 was contributed by the Scottish Bowlers' Motor Ambulance Fund, a further sum of £200 from the Scottish Teachers' Fund for War Relief, and the City of Glasgow Kennel Club sent £67, the profits of their recent show. In the middle



of the month the Executive, anticipating the demand for increased accommodation in auxiliary hospitals which the Somme offensive has brought with it, asked that offers of such accommodation in the western district of Scotland should be made to Sir Hector Cameron. Among subscriptions received at this time were a sum of £436, the free surplus from a cattle show and free-gift sale held by the Cathcart and Eastwood Farmers' Society on behalf of the Red Cross, a further sum of £250 from the St. Andrew's Society of the River Plate, a further sum of £250 from the *Glasgow Evening News* fund (bringing its total subscription to £1,800), a sum of £185 from the Voluntary Aid Detachment, Glasgow, No. 32, and a further sum of £100 from the patrons of the Glasgow Coliseum.

At this time, also, Lord Provost Dunlop forwarded to Mr. D. H. Illingworth, honorary secretary of the French Red Cross, the sum of £1,112, 10s., being the amount collected by his Lordship in order to provide a dental ambulance, and to cover the cost of maintenance for several months. The ambulance was to bear the name of the City of Glasgow, and to be in charge of a staff from the city. In acknowledging the gift, Mr. Illingworth stated that it would "lay France once more under a deep debt of gratitude to their old friends the people of Scotland." The scheme of dental first aid had met with the highest approval of the French Government.

It was intimated on 18th July, in connection with the orthopædic annexe to be built at Bellahouston, that the Scottish Red Cross had voted £5,000 to the cost of the addition, and had allotted about 200 beds for orthopædic cases. The equipment would include radiant heat baths, hot and cold douches, a pool bath, and a whirlpool bath, which is a development of the *eau courante* employed in France, consisting of air and water in rapid motion at high temperatures. These baths prepared the limb for massage, which would be given by a trained staff of attendants, and for various movements that form part of the combined treatment. It was expected that the annexe, which would also be furnished with electro-therapeutic appliances, would be able to deal with 300 or 400 patients each day. The cases completely cured by this method of treatment at the Grand Palais in Paris formed 51 per cent of the number treated, while in one month (October, 1915) 452 men who had

been disabled were able to return to active service. The object in view was to restore useful soldiers to the army in the shortest possible time; to limit disablement where it could not be completely cured, so as to preserve a man's capacity for civil work; and to effect economy to the State by diminishing the cost of pensions.

On 22nd July a fully equipped motor ambulance waggon, provided by the Scottish Colliery Engine and Boiler Men's Association, was presented to the Scottish Branch of the British Red Cross Society. The presentation took place in Blythswood Square, Glasgow, and Sir George Beatson accepted the gift on behalf of the Society. The sum of £600 had been collected by the Association to provide the ambulance. About the same time an anonymous gift of £500 was received by the Branch, a sum of £286 was received from the County of Renfrew European War Relief Committee, being a further monthly contribution, and sums of £100 were received from the Sungei Way (Selangor) Rubber Company, Limited, and the Selangor Rubber Company, Limited. A sum of £57, 15s. 3d. was received from Colonel Warden R. Maxwell, V.D., being the collection at a memorial service held on 28th June, 1916, in the Glasgow Cathedral in honour of the officers, non-commissioned officers, and men of the 8th Scottish Rifles who fell at Gallipoli.

Further subscriptions received towards the end of the month included £521, being the amount of the Motherwell Red Cross Ambulance Fund to provide the "Motherwell ambulance," and £450 from the staff and workers of Nobel's Company Ardeer Works, to provide "Ardeer Factory No. 2 ambulance." £100 was received from Messrs. Honeyman & Co. from the steamers *Aranda* and *Attika*, and £93, 15s. from the Supply of Coal to France Scottish Committee. A sum of £75 was contributed by the girls of St. George's School, Edinburgh, being the proceeds of performances of "The Tempest."

August opened with the announcement that the trustees of the late Mr. Wilson had placed Hillhead House, Glasgow, at the disposal of the Society as an auxiliary hospital, and that it was to be equipped and maintained by the County of the City of Glasgow Red Cross Committee, and had been attached to Springburn and Woodside Hospital.

During the last days of July and the first week of August a



special effort was made in Ayrshire to raise funds for the Branch. Its chief feature was a floral fête and fancy fair at Craigie House, Ayrshire, the residence of Mr. J. A. Campbell, held in brilliant weather and attended by between 9,000 and 10,000 people. The drawings from the fête alone amounted to at least £5,000, and on the preliminary days very considerable sums were also raised. Among subscriptions received in the early part of the month were £170 from a ladies' day held by Paisley Victoria Bowling Club; £300 from the readers of *The Scottish Farmer*, making £2,300 contributed from this source; £170 from a garden fête at Rio de Janeiro; and sums of £100 from the Royal Caledonian Curling Club, the Glasgow Credit Drapers' Association, and from Ceylon. A motor ambulance presented by the priests of Scotland through the Bishop of Aberdeen, and known as "The Priests' Ambulance," was announced to be working successfully at the front. In the middle of the month statistics issued as to the work of the Branch in the transport of the sick and wounded up to 25th June, 1916, showed that the Scottish Red Cross ambulances at Rouen had covered a mileage of 361,541 miles and carried a total number of 163,913 sick and wounded soldiers and orderlies. During the same period the Scottish Red Cross ambulances in Glasgow had a mileage of 308,061 miles, and carried a total of 156,695. Similar statistics demonstrated the important work done by the Scottish convoy in the French lines, and by the motor ambulances stationed in other centres throughout Scotland. Further subscriptions intimated included a sum of £250 from the Reed & Prince Manufacturing Company, Worcester, Mass.; £319, 12s. 10d. from the Sutherland Farmers' Club free-gift sale in the county; £273, 14s. 11d. as a monthly contribution from the County of Renfrew European War Relief Committee; £500 from the Linlithgowshire Red Cross Branch; and a further sum of £175 from the West of Caithness Red Cross Unit. A produce sale at Thurso, opened by the Duchess of Portland, realised over £400.

It was reported on 28th August that since the opening of the season gifts of game amounting to 2,442 grouse, 52 hares, and venison had been received by the Branch, and had been distributed to a large number of hospitals and auxiliary hospitals.

Over £1,000 was realised by a free-gift sale at Biggar, and £208 from a sale of work held in the Burgh Hall, Dunoon.

On the same date Hillhead House was formally opened as an auxiliary hospital by Mrs. Osborne of Kippendavie. Mr. Macouat, convener of the committee in charge of the equipment of the institution, explained that the house had been placed at the disposal of the Society by the trustees of the late Mr. John Wilson, formerly M.P. for Govan. Although perhaps one of the oldest houses in the neighbourhood, it was of a most substantial character, and had been readily adapted to the purposes of a hospital. Accommodation was provided for over 30 patients, and the staff would consist of Miss Eadie as matron and ladies of the Voluntary Aid Detachments, who had been trained under Mrs. Parsons. The Lord Provost referred to the great work which the Red Cross Society were doing for the alleviation of pain and suffering among wounded soldiers, and said there was urgent need for even more hospital beds in order that they might be able to meet all future requirements. They were grateful to the many generous citizens who had offered the use of their homes as hospitals, and especially to the trustees of the late Mr. Wilson, whose daughter, Mrs. Osborne, was present to declare the new hospital open.

At the end of the month a further contribution of £748, 19s. 4d. was intimated from the Scottish Children's War Effort, giving a total to date from this source of £2,305, 1s. 9d. A sum of £100 was also received from the Kirkcaldy Branch to name a bed at Bellahouston and one in the Scottish Ward at Petrograd.

In the beginning of September further subscriptions included a sum of £328 raised by a bazaar at Kirkcudbright; £120 from a floral display in the Hutchesontown Gardens, Crossmyloof; £110 from the Kilmarnock Branch; a further sum of £363 from the Trades House and Incorporations War Relief Fund, Glasgow; £250 from the Jugra Rubber Estates, Limited; and £100 from the proceeds of the Keith and district free-gift sale. A garden fête and fancy fair held at Machriemore House, Maybole, on 9th September, realised £200. On the 11th it was announced that through the generosity of the coalowners and miners of Scotland the Branch had been put in a position to render aid, in the form of field hospitals and motor ambulances,



to Roumania and Serbia, and that assistance would be sent as soon as possible.

A carnival in aid of the Red Cross and Limbless Sailors' and Soldiers' Hospital was held at Coatbridge on 16th September. About 40,000 attended; £800 was drawn in cash at the gate, and about 20,000 were admitted by ticket. An exhibition and sale held by Neilston and Uplawmoor Horticultural Society in conjunction with the local branch of the Red Cross Society realised, on the same date, £173. A sale of work at the Manse, Inchinnan, produced about £130. Subscriptions received up to 20th September included sums of £150 from the Western Bowling Club; £119, 12s. 10d. from the Clan Mackenzie No. 29, Order of Scottish Clans, U.S.A. and Canada; a further sum of £100 from the patrons of the Glasgow Coliseum; and a sum of £100 from the British Borneo Para Rubber Company, Limited. A gala and sale of work in Redheugh Grounds, Kilbirnie, on 23rd September, realised over £500. At a ladies' fête day and sale of work held on 30th September under the auspices of the Anchor Mills Bowling Club, Paisley, the drawings amounted to £704, and it was expected that the fund would reach £900.

LITERARY INTELLIGENCE.—The sixth edition of Hutchison and Rainy's *Clinical Methods* is announced for early publication by Messrs. Cassell & Co.

---

### NEW PREPARATIONS, &c.

From Messrs. Horlick's Malted Milk Co., Slough, Bucks., England.

Horlick's Malted Milk Tablets are a form of Messrs. Horlick's well-known preparation, very convenient for the use of those whose work is undertaken in conditions where a concentrated and nutritious diet is required. For this purpose the tablets have been extensively supplied both to the navy and the army, and they should prove of much service to munition workers, for whose needs the original preparation is also very suitable.

REVIEWS.

---

*Four Chiefs of the G.R.I.: Dr. Harry Rainy, Dr. Andrew Buchanan, Dr. John Gibson Fleming, Sir William Tennant Gairdner, K.C.B., M.D.* By J. WALLACE ANDERSON, M.D.  
Glasgow: John N. M'Kinlay & Co. 1916. (2s. 6d. net.)

THE four papers of which this little volume is composed have appeared at intervals in the pages of the *Journal*, and our readers are therefore already familiar with them. But since in their occasional form they gave pleasure to many, we are confident that the kindliness and grace of Dr. Wallace Anderson's memorials will have a still wider appeal when they are collected in this convenient shape, which should also induce many of his original readers to acquire them as a permanent possession. The subjects are men famous in the older medical life of Glasgow, and the characters of each of them are so happily indicated that when we have read we feel that we know and see the men. The writer of memoirs, however, must tell as much of himself as of his subjects; his very selection is an index of his character. We feel convinced that no distinguished reader could desire to have a kindlier or more discerning biographer than Dr. Wallace Anderson.

---

*The Chemistry of Colloids, and some Technical Applications.*  
By W. W. TAYLOR, M.A., D.Sc. London: Edward Arnold.  
1915. (7s. 6d. net.)

IT is somewhat difficult to place this book as, although crystalloids and colloids have been worked at for a hundred years, the subject is not one that has been systematised in the ordinary text-books of chemistry or physics, and this volume really stands by itself as an attempt to furnish a text-book



on the subject. It is divided into four parts—the general properties of colloids, methods of preparation, absorption, and applications of colloid chemistry. The subject is a very interesting one, and, though a great deal of work has been done, we are apparently only as yet on the fringe of a comparatively unexplored territory. Certainly it is a book that teachers of chemistry and physics ought to be familiar with, and it will prove of interest to medical men who wish to keep up with what is the present position of the subject. The author has succeeded very well in putting forward his subject, although it will take very careful reading by the ordinary practitioner before he becomes very wise about colloids.

---

*A Guide to the Use of Tuberculin.* By ARCHER W. R. COCHRANE, M.B., F.R.C.S., and CUTHBERT A. SPRAWSON, M.D., B.S., M.R.C.P. London: John Bale, Sons & Danielsson, Limited. 1915. (5s. net.)

THE authors are both Majors in the Indian Medical Service. The present volume is presented by them as a working guide to the administration of tuberculin, giving, it is hoped, sufficiently precise rules to enable the practitioner to estimate fairly accurately, and at any rate safely, the initial dose of tuberculin in any given case. For this purpose the various types of the disease are classified.

The nature of the tuberculin reaction and the technique employed are fully described. The authors pay great attention to daily weighing of the patient, and claim that the weight serves as a reliable "reaction index."

In a book of this nature it would be difficult to avoid a degree of dogmatism, and we find many statements with which one might be inclined to differ. We are told, for instance, that "clinical experience shows that closed cases of the disease never become open if treated with tuberculin." Personally we are optimistic regarding the value of tuberculin, but, in tuberculous disease, so many clinical types are seen that any definite rule is likely to have many exceptions.

A chart, on page 49, to illustrate supersensitivity strongly

suggests an acute spread of the disease, though in febrile cases it is, of course, very difficult to estimate temperature reaction.

The authors' claim to have set before the practitioner a clear and reliable guide to the safe administration of tuberculin seems well established, and the book can be confidently recommended for this purpose.

---

*Emergencies in Medical Practice.* By SANITÆTSRAT DR. RICHARD LENZMANN. Translated from the Third Edition by R. E. S. KROHN, M.D. London: John Bale, Sons & Danielsson, Ltd. 1915. (21s. net.)

THE scope of this book is better expressed in the sub-title—"The pathology and treatment of morbid conditions that may suddenly endanger life"—than in the title. It is a reasoned exposition of the means by which such emergencies may be met, and as it is impossible to handle them successfully without a knowledge of their causes, a considerable amount of space is devoted to pathological and theoretical considerations. The work, however, gains rather than loses by this method of treatment, though it will be clear that a book constructed on such lines can be no pocket companion. It is divided into sections dealing with the various systems of the body. In the first, which is concerned with the nervous system, the causes, phenomena, and treatment of sudden loss of consciousness and of sudden paralysis are considered. The second discusses emergencies connected with the respiratory tract—hæmorrhage, stenosis and occlusion of the respiratory tube, œdema of the lung, pulmonary embolism, pleurisy with effusion, and pneumothorax. Section three treats of conditions of danger arising out of circulatory disease; section four of dangers due to disease of the digestive system; and section five of dangerous affections of the urogenital system—hæmorrhage, retention, suppression, and uræmia. A sixth section is given to the sudden dangers arising in pregnancy, labour, and child-bed; and the volume closes with an account of the various forms of poisoning, and of serum sickness.

The translation is very well done, the style is easy, and the work abounds in clinical illustrations. It is to be regretted, for



the purposes of the English reader, that the translator has stuck so closely to his original as to recommend only German preparations, and never their English equivalents; but with a little goodwill the substitutions may be easily made by the reader himself, who will find himself well rewarded for his trouble by a sense of increased resource in his handling of many dangerous conditions.

---

*Manual of Medical Jurisprudence, Toxicology, and Public Health.* By W. G. AITCHESON ROBERTSON, M.D., D.Sc.  
London: A. & C. Black, Limited. 1916. (10s. 6d. net.)

THE present volume is a carefully revised and enlarged third edition of the author's *Manual*, which was originally written as a text-book for students preparing for examination in these subjects. The previous editions were well received, and fulfilled the object of the writer; and the present edition, with its additional chapters on the "Medical inspection of school children" and on "Industrial hygiene and diseases due to occupation," we would expect would meet with a similar success. The *Manual* has been carefully revised and additions made to the text, and a number of new illustrations inserted. The scope of the work is such that it covers practically the whole ground required by the student for his examination, without burdening him with unnecessary illustrative cases; and the manner in which the different sections of the book—medical jurisprudence, toxicology, and public health—have been spaced show the care which the author has taken to present the subject in an uniform, condensed, and very readable form. The way in which the various topics have been presented and discussed also show that he has succeeded in his object of supplying the student with a small yet reliable text-book.

---

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

---

EDITED BY ROY F. YOUNG, M.B., B.C.

---

### M E D I C I N E.

**The Use of the Schick Test in a Children's Institution.** By Harry Linenthal and Solomon H. Rubin (*Boston Medical and Surgical Journal*, 16th September, 1915).—The Schick test consists of injecting under the superficial layers of the skin a fiftieth of the dose of diphtheria toxin required to kill a guinea-pig of 250 grams. A fine short-pointed platinum needle is used and a raised bleb appears, but disappears in a few minutes. In the susceptible to diphtheria a bright red area with a pale indurated centre is found in from twenty-four to forty-eight hours. The degree of reaction varies inversely to the antitoxin contents of the blood. There are no constitutional symptoms or local discomfort. Antitoxin of 750 units given to the non-immune produced an immunity which did not last over four weeks in 50 per cent; in six cases it persisted for five months. The value of the test in cases of exposure to diphtheria is that we can estimate susceptibility to the disease, and so determine which cases require a prophylactic dose.—JAMES SCOTT.

**A Preliminary Report on the Results of Wassermann Tests as reported from different Laboratories.** By R. D. Phelps (*Boston Medical and Surgical Journal*, 16th September, 1915).—The results of 358 specimens are tabulated thus:—Four laboratories—of 113 bloods, 68 agree, 45 disagree; three laboratories—of 135 bloods, 70 agree, 65 disagree; two laboratories—of 110 bloods, 72 agree, 38 disagree. The author places very little reliance on a negative Wassermann on a single test. Alcohol has a distinct effect in making the test negative. He also draws attention to a small knob on the frenum of the upper lip, but cannot say that it is a sign of syphilis.

—JAMES SCOTT.

---



## SURGERY.

**Dangers of Intestinal Exclusion.**—By G. Grey Turner (*The British Journal of Surgery*, October, 1916).—Many surgeons do not seem to realise the amount of secretion produced by the mucosa of the intestine, or that when a piece of bowel is closed at both ends, while retaining its blood and nerve supply, secretion will continue until something like a cyst is produced which may rupture and cause death. After many operations, particularly for removal of malignant growths of bowel, portions of intestine are left thus doubly obstructed.

The author quotes several interesting illustrative cases. One is of a type familiar to all surgeons. When the vermiform appendix is obstructed at the cæcal end the mucosa continues to secrete, and this fluid finding no escape a cyst is formed. In all likelihood the fluid is infected, and when rupture takes place peritonitis results.

The author removed a malignant growth from the ascending colon and closed both ends of the bowel. He then performed lateral anastomosis between ileum and transverse colon. The contents of the cæcum could not pass onward on account of the colon being closed, nor could they pass backwards as the ileo-cæcal valve remained competent. The cæcum became distended with mucus and burst, leading to the death of the patient.

In another case, the patient had an irremovable cancer of the cæcum. The author divided the ileum about a foot from its termination, closed the distal opening, and implanted the proximal end into the sigmoid. The patient was dismissed in due course, but was re-admitted nine weeks later with symptoms of urgent abdominal mischief. Operation showed the terminal portion of ileum to be distended with fluid to three or four times its normal size, and there were yellowish areas on its surface suggesting sloughing. The cæcal cancer had closed the ileo-cæcal opening, and the terminal part of the ileum thus became obstructed at both ends.—CHARLES BENNETT.

**Fracture of the Odontoid Process of the Axis.** By Prescott Le Breton (*Amer. Jour. of Orthopedic Surgery*, September, 1916).—This case was brought under the author's care about two and a half weeks after the injury was received. One of the horses of a waggon had fallen on the patient's head and neck, and he had been kept under observation by a physician before admission to hospital. The author found the chin tilted up and to the left, but no spasticity of muscles. The head could not be moved in any direction. There was constant pain. Sensation was normal and the pupils were regular, but the pulse was slow. X-ray photographs showed, in lateral view, a tilting forward of the atlas, and one taken through the mouth revealed very clearly a fracture line running across the base of the odontoid process of the axis.

Traction to the head was tried, but no benefit resulted. One day, however, the patient placed his right hand at the back of his neck and his left on top of his head, then wrenched his head straight with considerable force. His pain ceased at once, and he could move his head more freely. A plaster collar was applied, and, at his own request, he was dismissed. Six months later, movement of the head had returned to a considerable degree, and some thickening was felt about the axis.—CHARLES BENNETT.

*Books, Pamphlets, &c., Received.*

- Four Chiefs of the G.R.I. (Dr. Harry Rainy, Dr. Andrew Buchanan, Dr. John Gibson Fleming, Sir William Tennant Gairdner, K.C.B., M.D.), by J. Wallace Anderson, M.D. With five photographs. Glasgow: John N. M'Kinlay & Co. 1916. (2s. 6d. net.)
- International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles, edited by H. R. M. Landis, M.D., with the collaboration of Chas. H. Mayo, M.D. Vol. II, twenty-sixth series. 1916. London: J. B. Lippincott Company. (35s. net, four volumes quarterly.)
- An Introduction to Dermatology, by Norman Walker, M.D., F.R.C.P., with the assistance of R. Cranston Low, M.B., F.R.C.P. Sixth Edition. With 63 coloured plates and 89 illustrations. Edinburgh: William Green & Son, Limited. 1916. (15s. net.)
- The Basis of Symptoms, The Principles of Clinical Pathology, by Dr. Ludolph Krehl, authorised translation from seventh German edition, by Arthur Frederic Beifela, Ph.B., M.D., with an Introduction by A. W. Hewlett, M.D. Third American Edition. London: J. B. Lippincott Company. 1916. (21s. net.)
- Transactions of the Thirty-Seventy Annual Meeting of the American Laryngological Association, held at Niagara Falls, Canada, 1915. Published by the Association.
- Traumatic Pneumonia and Traumatic Tuberculosis, by F. Parker Weber, M.A., M.D. London: Adlard & Son and West Newman. 1916. (6d.)
- La Fièvre Typhoïde et les Fièvres Paratyphoïdes (Symptomatologie, Etiologie, Prophylaxie), par H. Vincent et L. Muratet. Paris: Masson et Cie. 1916.
- Les Formes Anormales Du Tétanos, Étude Clinique Pathogénique Prophylactique et Therapeutique, par M. Courtois-Suffit et R. Giroux, Preface du Professeur Fernand Widai. Paris: Masson et Cie. 1916.
- Traitement des Fractures, par R. Leriche. I: Fractures Articulaires. Avec 97 figures dans le texte. Paris: Masson et Cie. 1916.
- Food and the Principles of Dietetics, by Robert Hutchison, M.D. Edin., F.R.C.P. With plates and diagrams. Fourth Edition. London: Edward Arnold. 1916. (16s. net.)
- Diseases of Children, by A. Dingwall-Fordyce, M.D., M.B., Ch.B. London: A. & C. Black, Limited. 1916. (10s. 6d. net.)
- Surgical Contributions from 1881-1916, by Rutherford Morison, M.B., F.R.C.S. Edin., F.R.C.S. Eng. Two Vols. Vol. I: General Surgery. Vol. II: Abdominal Surgery. Bristol: John Wright & Sons, Limited. 1916. (Vol. I, 15s. net; Vol. II, 30s. net; Two Vols. 45s. net.)
- When to Advise Operation in General Practice, by A. Rendle Short, M.D., B.Sc. Lond. Bristol: John Wright & Sons, Limited. 1916. (5s. net.)
- The Essentials of Chemical Physiology for the Use of Students, by W. D. Halliburton, M.D., B.L.D., F.R.S. Ninth edition. With coloured plate. London: Longmans, Green & Co. 1916. (6s. net.)



GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDED 25TH NOVEMBER, 1916.

	WEEK ENDING				
	Oct. 28.	Nov. 4.	Nov. 11.	Nov. 18.	Nov. 25.
Mean temperature, . . .	44·9°	45·5°	47·0°	45·1°	44·1°
Mean range of temperature between highest and lowest,	17·9°	12·3°	21·9°	22·6°	15·9°
Amount of rainfall, . ins.	0·36	1·46	0·91	0·08	1·14
Deaths (corrected), . . .	246	278	307	285	341
Death-rates, . . . . .	11·8	13·3	14·7	13·6	16·3
Zymotic death-rates, . . .	0·4	0·4	0·4	0·3	0·6
Pulmonary death-rates, . .	3·0	2·8	3·7	3·3	4·6
DEATHS—					
Under 1 year, . . . . .	38	59	51	42	69
60 years and upwards, . .	77	85	79	82	108
DEATHS FROM—					
Small-pox, . . . . .	...	...	...	...	...
Measles, . . . . .	5	2	1	2	6
Scarlet fever, . . . . .	2	1	4	...	2
Diphtheria, . . . . .	...	3	1	1	2
Whooping-cough, . . . . .	1	1	2	2	...
Enteric fever, . . . . .	...	2	1	1	2
Cerebro-spinal fever, . . .	...	2	1	1	...
Diarrhoea (under 2 years of age),	9	6	8	8	7
Bronchitis, pneumonia, and pleurisy, . . . . .	40	47	60	56	75
CASES REPORTED—					
Small-pox, . . . . .	...	...	...	...	...
Cerebro-spinal meningitis, .	1	4	3	1	3
Diphtheria and membranous croup, . . . . .	29	35	26	35	21
Erysipelas, . . . . .	25	17	31	23	27
Scarlet fever, . . . . .	84	94	66	66	79
Typhus fever, . . . . .	...	...	...	...	...
Enteric fever, . . . . .	2	9	2	4	2
Phthisis, . . . . .	46	42	46	67	51
Puerperal fever, . . . . .	4	...	8	...	4
Measles,* . . . . .	46	39	52	55	46

\* Measles not notifiable.

SANITARY CHAMBERS.

GLASGOW, 6th December, 1916.

# INDEX.

—o—

ABSCCESS of liver, tropical, 337.

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE—

Anæsthetics, 126, 319.

Clinical pathology, 253.

Diseases of the eye, 189, 251.

Medicine, 59, 250, 371.

Obstetrics and gynæcology, 61, 316.

Surgery, 125, 188, 372.

ADAMS, D. R.—Ulceration of the small intestine with formation of indol-derivatives and indigo-uria, 129.

Afforestation for tuberculous cases, 325.

ALLAN, J. W.—Outdoor occupations for tuberculous cases, 321.

Anæsthesia, narco-local, 126.

Anæsthetics, influence of, on body temperature, 319.

Aneurysm of the hepatic artery. J. H. Teacher and W. R. Jack, 277.

Artificial respiration in still-born infants, 61.

Asthenopia, 263.

Atresia of pulmonary orifice, congenital, 84.

Atropine in the reduction of myopia, 216.  
dermatitis in ophthalmic practice, 218.

Auto-transfusion of blood, 62.

Axis, fracture of odontoid process of, 372.

*Bacillus aerogenes* in pneumo-peritoneum, 316.

BALLANTYNE, A. J.—Some eye symptoms and their interpretation, 257.

Birth control, 317.

Blood, auto-transfusion of, 62.

Bones, tunnels and cavities in, 188.

CATARACT, vision in early, 269.

Cauda equina, enuresis in stretching of, 60.

Circulatory debility due to nervous strain, 205.  
shock, 202.

in soldiers, 194.

failure due to functional causes, 207, 210.

peripheral causes, 207.

primary heart disease, 207, 209.

psychical disorders, 210.

Congenital heart disease, some varieties of. L.

Findlay and W. B. M. Martin, 1, 84, 140.

Conjunctival pain, characters of, 259.

CRAIG, J.—Disease and domesticity, 73.

## CURRENT TOPICS—

Appointments, 39, 96, 152, 232, 294, 350.

Appointment for Colonel Sir W. B. Leishman, 41.

Hospital for Limbless Sailors and Soldiers, 41.

Glasgow Deaf and Dumb Mission, 42.

Highlands and Islands Medical Service Board, 43.

The care of children, 44.

The war and the medical profession, 46.

The drink problem of to-day, 48.

Literary intelligence, 51, 177, 243, 366.

Commemoration day at Glasgow University, 93.

University of Glasgow: graduation in medicine, 94, 293, 346.

Triple Qualification: list of passes, 95, 347.

Royal Faculty of Physicians and Surgeons: dental passes, 96, 294.

Royal College of Surgeons of Edinburgh: dental passes, 96, 347.

Central Midwives' Board for Scotland, 97.

Royal Medical Benevolent Fund: appeal for funds, 98.

Scottish Hospital for Limbless Sailors and Soldiers, 100, 168.

War honours for Glasgow graduates, 100, 234, 296, 351.

Glasgow medical casualties, 103, 154, 235, 297, 352.

Collection of medical herbs, 103.

Results of the treatment of phthisis under the Insurance Act, 104.

St. Andrew's Ambulance Association: annual meeting, 106.

Red Cross Society: work of the Scottish Branch, 107, 361.

New preparations, 115, 366.



CURRENT TOPICS (*continued*)—

- University of Glasgow : return of alumni in the forces, 152.  
 Mentioned in despatches, 154.  
 Royal College of Surgeons of Edinburgh : new Fellows, 155, 347.  
 Hoffmann-La Roche Chemical Works, Ltd., 156.  
 Child welfare exhibition, 156.  
 Bequests to medical charities, 160, 354.  
 French honour for secretary of Scottish Women's Hospitals, 161.  
 Educative convalescence, 163.  
 Société Nationale de Chirurgie de Paris : prize for an artificial hand, 164.  
 Visual standard in the examination of recruits, 165.  
 Ralston Hospital for Paralysed Soldiers : opening ceremony, 166.  
 Scottish Hostel for Blinded Soldiers and Sailors, 170.  
 Glasgow Dental Hospital : annual report, 170.  
 Decrease in insanity in Scotland, 171.  
 Glasgow District Mental Hospital, Gartloch : annual report, 172.  
 James Murray Royal Asylum, Perth : annual report, 174.  
 Royal Edward Institute for Tuberculosis, Montreal : annual report, 175.  
 Medical Sickness and Accident Society : annual report, 176.  
 "History of the Royal College of Surgeons in Ireland and of the Irish Medical Schools," 177.  
 University of Glasgow : regulations for graduation in medicine, 226.  
 Royal Faculty of Physicians and Surgeons : regulations for Triple Qualification, 228.  
 Extra-mural schools in Glasgow, 229.  
 Glasgow medical clinics, 229.  
 Medical students in the army, 235.  
 Orthopædic treatment at Woodside Hospital, 236.  
 Postage of deleterious liquids or substances, 238.  
 Research in Britain and Germany, 238.  
 County of Dumfries : annual medical report, 241.  
 Royal Faculty of Physicians and Surgeons : new Fellow, 294.  
 Needs of the Royal Infirmary, 297.  
 Additions to Springburn Hospital, 298.  
 Experiments on living animals, 299.  
 Medical treatment of school children, 300.  
 The condition of housing in Scotland, 301.  
 Sanitary Association of Scotland : annual congress, 307.  
 State registration of nurses, 309.  
 Dunoon Convalescent Homes, 311.  
 University of Glasgow : matriculation for session 1916-17, 346.

CURRENT TOPICS (*continued*)—

- Royal Faculty of Physicians and Surgeons : annual meeting, 348.  
 The late Professor Ferguson, 353.  
 Maternity and infant welfare centres in Glasgow, 355.  
 Treatment of venereal diseases : regulations of Local Government Board, 356.  
 National insurance in Lanarkshire, 357.  
 Glasgow Hospital for Women, 358.  
 East Park Home for Infirm Children, 359.  
 Scottish Nurses' Association, 359.  
 Scottish Marine Biological Association, 360.
- DAVIDSON, W. T. G.—Some observations on advanced pulmonary tuberculosis, 330.  
 Dermatitis due to ophthalmic use of atropine, 218.  
 Diet in advanced tuberculosis, 334.  
 Dietetic treatment of gastric ulcer, 27.  
 Diphtheria, Schick test for susceptibility to, 371.  
 Disease and domesticity. J. Craig, 73.  
 Ductus arteriosus, mode of closure of, 142, 144.  
   patent, 84.  
   case of, 140.  
   diagnosis of, 146.  
   structure of, 144.
- ECLAMPSIA, viscera in fatal case of, 61.  
 Ectopic pregnancy, case of, going beyond full time. R. Jardine, 137.  
 Enuresis, congenital and acquired, from spinal lesions, 60.  
 Eye and orbit, war wounds of, 252.  
   symptoms and their interpretation. A. J. Ballantyne, 257.  
 Eyestrain, 263.  
   conjunctivitis in, 265.  
 Exophthalmic goitre, radium treatment of, 250.
- FARMING for tuberculous cases, 322.  
 FAULDS, A. G.—Liver abscess amongst our soldiers, 337.  
 Fibromyoma, uterine, free in an abscess, 62.  
 FINDLAY, L., and W. B. M. MARTIN.—Some varieties of congenital heart disease, 1, 84, 140.  
 Fœtus in utero, metacentric height of, 62.  
 Foramen ovale, patent, case of, 2.  
   cause of systolic murmur in, 5.  
   discussion of symptomatology of, 5, 10.  
 Foreign bodies in the eye, 252.  
   body sensation in eye, significance of, 259.  
 Fracture of odontoid process of axis, 372.  
 Fractures, operative *v.* non-operative treatment of, 125.  
 Fresh air in advanced tuberculosis, 334.  
 FULLERTON, R. Cessation of vertiginous attacks following intra-nasal treatment, 286.

GANGRENE of lung following artificial pneumothorax, 250.

Gardening for tuberculous cases, 324.

Gastric ulcer, dietetic treatment of, 27.  
etiology and treatment of. H. Morton, 23.  
medicinal treatment, 33.  
rectal feeding in, 28.

Giddiness of ocular origin, 275.

Glasgow meteorological and vital statistics, 64,  
128, 192, 256, 320, 374.

Glaucoma, vision in, 267.

Goitre, exophthalmic, radium treatment of,  
250.

HEADACHE of ocular origin, 273.

Heart disease, some varieties of congenital. L.  
Findlay and W. B. M. Martin, 1, 84, 140.

Hemeralopia in soldiers, 189.

Hepatic artery, aneurysm of. J. H. Teacher and  
W. R. Jack, 277.

Hernia into the para-duodenal fossa, report of a  
case of. J. H. Pringle, 65.  
operations for umbilical and ventral, 63.

Hyperphoria, ocular pain in, 261.

Hypopituitarism and Leber's disease, 189.

INDIGO-URIA and ulceration of small intestine.  
D. R. Adams, 129.

Infantile paralysis, surgical treatment of, 188.

Interventricular septum, patent, case of, 10.

Intestinal exclusion, dangers of, 372.

JACK, W. R., and J. H. TEACHER.—Aneurysm of  
the hepatic artery, rupture of liver, and  
periarteritis nodosa, 277.

JARDINE, R.—Case of ectopic pregnancy which  
had gone beyond full time, 137.

KIDNEYS, chronic disease of, and mental disorder,  
78.

LARYNX and trachea in still-born infants, con-  
dition of, 61.

Leber's disease, etiology of, 189.

Lenhartz treatment of gastric ulcer, 30.

Leube-Ziemssen treatment of gastric ulcer, 28.

Liver abscess amongst our soldiers. A. G. Faulds,  
337.

rupture of, from hepatic aneurysm, 277.

Lung, gangrene of, following artificial pneumo-  
thorax, 250.

MACKENZIE, I.—The soldier's heart, 193.

MARTIN, W. B. M., and L. FINDLAY.—Some  
varieties of congenital heart disease, 1, 84,  
140.

Meningitis, optic neuritis in, 251.

Mental disorders and chronic renal disease, 78.

Metacentric height of foetus in utero, 62.

Monilia of sprue, animal experiments with, 59.

MORTON, H.—Etiology and treatment of gastric  
ulcer, 23.

Myelodysplasia, enuresis in, 60.

Myopia, reduction of, in children of school age.  
W. B. Inglis Pollock, 214.

NARCO-LOCAL anæsthesia, 126.

Neuralgia, ocular, 259.

Nursing in advanced tuberculosis, 333.

#### OBITUARY—

Binning, R. J., 148.

Boyd, J. S., 292.

Brown, J. R., 342.

Campbell, J. M., 224.

Cochran, J. D., 291.

Connor, G. M., 92.

Farrar, W. W., 220.

Frew, D. T. C., 290.

Gilmour, Jean T., 291.

Hall, A. J., 149.

Herbertson, R. G., 150.

Houston, T. C., 220.

Jamieson, J., 345.

Logan, A. T., 341.

Lyell, J. H., 36.

Macarthur, J. N., 343.

Macintyre, A., 292.

M'Lachlan, S. F., 38.

M'Lelland, A., 225.

M'Naught, H., 37.

Mowat, G., 341.

Nicol, C. M., 342.

Paxton, A. G., 150.

Service, J., 36.

Shand, W. G., 148.

Shearer, Ella S. M., 344.

Sime, D., 92.

Spence, D., 151.

Strain, T., 221.

Stuart, W. A., 344.

Taylor, R. D., 225.

White, H., 37.

Wilson, W., 222.

Ocular headache, 273.

pain, significance of, 259.

Odontoid process of axis, fracture of, 372.

Operative v. non-operative treatment of fractures,  
125.

Ophthalmoscopic changes in trench nephritis,  
251.

work at a base hospital, 251.

Optic atrophy, etiology of hereditary, 189.

neuritis in increased intra-cerebral pressure,  
251.



Optic neuritis in meningitis, 251.  
Orbit, war wounds of, 252.  
Orbital pain, significance of, 260, 261.  
Outdoor occupations for tuberculous cases. J. W. Allan, 321.

PAIN, ocular, 259.  
Paralysis, surgical treatment of infantile, 188.  
Periarteritis nodosa, 277.  
Phthisis, diet in advanced, 334.  
observations on advanced. W. T. G. Davidson, 330.  
tuberculin in advanced, 335.  
Pituitary body and hereditary optic atrophy, 189.  
Leber's disease, 189.  
Pneumo-peritoneum, 316.  
Pneumothorax, artificial, followed by gangrene of lung, 250.  
POLLOCK, W. B. I.—Reduction of myopia in children of school age, 214.  
Pregnancy, case of ectopic, going beyond full time. R. Jardine, 137.  
PRINGLE, J. H.—Report of a case of hernia into the para-duodenal fossa, 65.  
Pulmonic stenosis, congenital, 84, 87.

RADIUM treatment of exophthalmic goitre, 250.  
Rectal feeding in gastric ulcer, 28.  
Renal disease, chronic, and mental disorders, 78.  
RENTON, J. M.—Experimental study of extirpation and transplantation of the thymus, 14.  
Respiration, artificial, in still-born infants, 61.  
Retinal embolism, vision in, 270.  
Retropharyngeal abscess in infants, 125.

#### REVIEWS—

ALLBUTT, Sir CLIFFORD.—Diseases of the arteries, including angina pectoris, 58.  
ANDERSON, J. WALLACE.—Four chiefs of the G.R.I., 367.  
BELL, W. BLAIR.—The sex complex, 52.  
BENNETT, R. R.—Materia medica and pharmacy for medical students, 187.  
BRUCE, H. A.—Sleep and sleeplessness, 315.  
BULKLEY, L. D.—Cancer: its cause and treatment, 186.  
CLARK, HILDA.—The dispensary treatment of pulmonary tuberculosis, 185.  
COCHRANE, A. W. R., and C. A. SPRAWSON.—Guide to the use of tuberculin, 368.  
CORIAT, J. H.—The meaning of dreams, 315.  
Curschmann's text-book on nervous diseases, by various German authors. Authorised English edition, edited by C. W. Burr, 118.  
DA COSTA, B. F. B., J. F. SANT ANNA, A. C. DOS SANTOS, and M. G. DE ARANJO ALVARES.—Sleeping sickness in the island of Principe. Translated by J. A. Wyllie, 119.

#### REVIEWS (continued)—

DESPARD, L. L.—Handbook of massage for beginners, 247.  
Encyclopædia medica, second edition, edited by J. W. Ballantyne. Vol. iii, chloroform to dyspnoea, 57.  
FOSTER, N. B.—Diabetes mellitus, 120.  
GASKELL, W. H.—The involuntary nervous system, 117.  
GEE, S. J.—Medical lectures and clinical aphorisms, fourth edition, 249.  
GOULD, G. M.—Pocket medical dictionary, seventh edition, 117.  
GROVES, E. W. H.—On modern methods of treating fractures, 179.  
HADDEN, D.—The gynecology of obstetrics: an exposition of the pathologies bearing directly on parturition, 124.  
HARDY, G. H.—The book of the fly, 121.  
HEALY, W., and MARY HEALY.—Pathological lying, accusation, and swindling, 181.  
HEWER, Mrs. J. L.—Our baby: for mothers and nurses, fifteenth edition, 314.  
HORSLEY, Sir VICTOR, and MARY D. STURGES.—Alcohol and the human body, fifth edition, 313.  
JONES, L.—The commoner diseases: their causes and effects. Translated by W. H. Woglom, 247.  
KELSON, W. H.—Diseases of the throat, nose, and ear, 56.  
KERR, J. M. M.—Operative midwifery, third edition, 244.  
KETTLE, E. H.—The pathology of tumours, 180.  
LENZMANN, R.—Emergencies in medical practice, translated by R. E. S. Krohn, 369.  
M'KENZIE, D.—The city of din: a tirade against noise, 55.  
Medical who's who, 1916, 314.  
PUTNAM, J. J.—Human motives, 315.  
ROBERTSON, W. G. A.—Manual of medical jurisprudence, toxicology, and public health, 370.  
RUSS, C.—A new treatment for gonorrhoea, 312.  
SAUNDY, R.—Urgent symptoms in medical practice, 184.  
SCOTT, T. B.—Modern medicine and some modern remedies, 246.  
TAYLOR, W. W.—The chemistry of colloids and some technical applications, 367.  
Transactions of American Laryngological Association, 1913, 1914, 122.  
VALLOW, H.—The inevitable complement: the care and after-care of consumptives, 56.  
WILSON, T. STACEY.—The early diagnosis of heart failure, and other essays on the heart and circulation, 116.  
WILSON, W. J.—Students' text-book on hygiene, 248.

REVIEWS (*continued*)—

- Yellow fever commission: reports on questions connected with the investigation of non-malarial fevers in West Africa, vols., iii and iv, 245.
- SCHICK test in a children's institution, 371.
- Scotoma, scintillating, 272.
- Soldier's heart. I. Mackenzie, 193.  
diagnosis, 200.  
due to psychical disorder, 210.  
etiology, 197.  
pathological physiology, 206.  
prognosis, 212.  
symptoms, 194.  
treatment, 213.
- Spina bifida occulta, enuresis in, 60.
- Sprue, animal experiments with monilia of, 59.
- Statistics, Glasgow meteorological and vital, 64, 128, 192, 256, 320, 374.
- Stenosis of pulmonary tract, congenital, 84, 87.
- Sterilisation of women, methods of, 318.
- Still-born infants, condition of larynx and trachea in, 61.
- Stomach, ulcer of, etiology and treatment, 23.  
Lenhartz treatment, 30.  
Leube-Ziemssen treatment, 28.  
medicinal treatment, 33.  
rectal feeding in, 28.
- TEACHER, J. H., and W. R. JACK.—Aneurysm of the hepatic artery, rupture of liver, and periarteritis nodosa, 277.
- Temperature, influence of anæsthetics on bodily, 319.
- Tetanus, early symptoms, 253.  
mortality, 253.  
recent work on, 253.
- Tetanus, symptoms, 252.  
treatment, 253.
- Thymus, experimental study of extirpation and transplantation of. J. M. Renton, 14.
- Treitz hernia, 65.
- Trench nephritis, ophthalmoscopic changes in, 251.
- Tropical abscess of liver, 337.
- Tuberculin in advanced pulmonary tuberculosis, 335.
- Tuberculosis, observations on advanced pulmonary. W. T. G. Davidson, 330.
- Tuberculous cases, outdoor occupations for. J. W. Allan, 321.
- Tunnelling of bone, 188.
- ULCERATION of the small intestine with formation of indol derivatives and indigo-uria. D. R. Adams, 129.
- Umbilical hernia, operation for, 63.
- Uterine fibromyoma free in an abscess, 62.
- VENTRAL hernia, operation for, 63.
- Vertiginous attacks cured by intranasal treatment. R. Fullerton, 286.
- Vertigo of ocular origin, 275.
- Vision, dimness of, 266.  
from central causes, 271.  
transient, 270.  
disorders of, 267.  
in early cataract, 269.  
glaucoma, 268.  
unilateral loss of, 269.
- WAR wounds of eye and orbit, 252.
- Wassermann test, results of, in different laboratories, 371.





PUBLISHED MONTHLY ]  
PRICE TWO SHILLINGS ]

JULY, 1916

[ VOL. LXXXVI  
[ NEW SERIES, VOL. IV

# The Glasgow Medical Journal

EDITED BY

G. H. EDINGTON and W. R. JACK

WITH THE ASSISTANCE OF

R. F. YOUNG (Sub-Editor of "Abstracts")

A. J. BALLANTYNE  
J. BROWNLEE  
R. M. BUCHANAN  
E. P. CATHCART  
F. J. CHARTERIS

L. FINDLAY  
A. A. GRAY  
R. MUIR  
E. H. L. OLIPHANT  
J. R. RIDDELL

---

**Fellows' Compound Syrup  
of Hypophosphites**

1866—1916

Not a new-born prodigy or an untried  
experiment, but a remedy whose useful-  
ness has been fully demonstrated during  
half a century of clinical application.

*For 50 Years The Standard*

**R** Syr. Hypophos. Comp. FELLOWS'

*Reject* < Cheap and Inefficient Substitutes  
Preparations "Just as Good"

THE FELLOWS  
MEDICAL WORKS, Ltd., Ltd.  
100, FIFTH AVE. N.Y.C.

---

GLASGOW: ALEX. MACDOUGALL, 70 MITCHELL STREET

LONDON: H. K. LEWIS & CO. LTD., 136 GOWER STREET, W.C.1

All communications regarding Advertisements for this Journal are  
to be addressed to Mr. W. COWAN, 70 Mitchell Street, Glasgow



## POPULAR HOTELS IN CENTRAL LONDON

---

OPPOSITE THE BRITISH MUSEUM.

# THACKERAY HOTEL

Great Russell Street, LONDON.

---

NEAR THE BRITISH MUSEUM.

# KINGSLEY HOTEL

Hart Street, Bloomsbury Square, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at MODERATE CHARGES, of those who desire all the advantages of the larger modern licensed hotels.

THESE HOTELS HAVE

**PASSENGER LIFTS, BATHROOMS ON EVERY FLOOR,  
LOUNGES AND SPACIOUS DINING,  
DRAWING, WRITING, READING, BILLIARD,  
AND SMOKING ROOMS.**

*Perfect Sanitation, Fireproof Floors, Telephones, Night Porters.*

---

**BEDROOM, BREAKFAST, BATH, AND ATTENDANCE,  
6/6 per night per person.**

**Full Tariff and Testimonials on application.**

---

Telegraphic Addresses—

Thackeray Hotel—"Thackeray, Westcent, London."

Kingsley Hotel—"Bookcraft, Westcent, London."

Telephones—

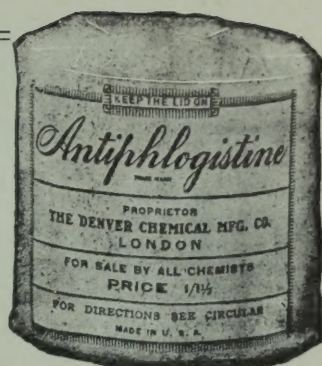
Museum 1230 (2 lines).

Museum 1232 (2 lines).

# Therapeutic Thoroughness

is possible only when the remedies used by the Patient, are exactly what the Doctor prescribed.

More than 20 years' experience, among physicians in all parts of the world, show that there is no successful substitute for



Directions:—Always heat in the original container by placing in hot water. Needless exposure to the air, impairs its osmotic properties—on which its therapeutic action largely depends.

## *Antiphlogistine*

There are many uses for Antiphlogistine, during the warm season—slight yet annoying ailments, such as occur during out-door activities

—Bruises—Sprains—Stings—Bites of insects and reptiles—Sunburn—Poison Ivy—Inflamed wounds from Fireworks or Firearms, etc., etc.

---

By ordering Antiphlogistine in full and original packages: Small, Medium, Large, or Hospital Size, “a perfect poultice” is assured.

---

Physicians should WRITE “Antiphlogistine” to AVOID “substitutes.”

*“There’s only ONE Antiphlogistine.”*

---

THE DENVER CHEMICAL MFG. CO.  
BOW, LONDON, E.



# Valentine's Meat-Juice

For **Quieting the Irritable Stomach in Pregnancy**, for **Rapidly Restoring the Vital Forces** after **Surgical Operations** and for **Sustaining and Strengthening**, **Valentine's Meat-Juice** is extensively employed in

## Obstetrical and Surgical Practice

**C. C. Frederick, M. D.**,  
*Clinical Professor of Gynæcology, University of Buffalo, New York, U. S. A.*: "I have used Valentine's Meat-Juice in the irritable stomachs of pregnant women and after abdominal operations with excellent success."

**Hermann B. Gessner, M.D.**,  
*Professor of Operative Surgery, Tulane University, New Orleans, La., U.S.A.*: "I have used Valentine's Preparation of Meat-Juice with excellent results, nutrition being sustained with it to a remarkable degree. It has proved especially useful when administered in combination with saline solution in the form of a nutritive enema."



---

For Sale by European and American Chemists and Druggists.

---

**VALENTINE'S MEAT-JUICE COMPANY,**  
**Richmond, Virginia, U. S. A.**



R

Glasgow medical journal

31

G5

v.86

GERSTS



